SONY

VTR PLAYBACK ADAPTOR
VA-500

BETACAM™

MAINTENANCE MANUAL

1st Edition (Revised 5)

Serial No. 10141 and Higher (JAPAN)

Serial No. 10342 and Higher (USA CANADA)

Warning—This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instructions manual, may cause interference to radio communications. It has been tested and found to comply with the limits for a Class A computing device pursuant to Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference in which case the user at his own expense will be required to take whatever measures may be required to correct the interference.

目 次

TABLE OF CONTENTS

3. VIDEO SYSTEM ALIGNMENT

4. オーディオ系電気調整要項

4. AUDIO SYSTEM ALIGNMENT

5. BLOCK DIAGRAMS

6. SEMICONDUCTOR ELECTRODES

7. SCHEMATIC DIAGRAMS

8. PRINTED CIRCUIT BOARDS

VIDEO

AUDIO

OTHERS

9. SPARE PARTS

第１章
テクニカルインフォメーション

1-1. 主な仕様

一般

電源　　：DC 12 $^{+5.0}_{-1.5}$ V

消費電力：15W
動作温度：０℃～＋40℃
動作湿度：85%以下（相対湿度）
保存温度：－20℃～＋60℃
重さ　　：本体2kg
外形寸法：212×88×222 mm（幅／高さ／奥行き）
　　（最大突起部含まず）

映像系（標準機による基準テープ再生時）

カラー方式　NTSC
VIDEO OUT 1／2（BNC×２）
　1.0 Vp-p 75Ω 不平衡　同期負
ADV SYNC IN（BNC）
　2.0 Vp-p 75Ω 不平衡　同期負
SC IN（BNC）
　1.0 Vp-p 75Ω 不平衡
VHF OUT（F型）
　２チャンネル（チャンネル切り換え可）
メタルテープ使用時

帯域　輝度：30Hz～4.5MHz $^{+0.5}_{-6.0}$ dB
　　クロマ：30Hz～1.5MHz $^{+0.5}_{-6.0}$ dB

S／N　輝度：48 dB以上
　(HPF：10kHz，LPF：4.2MHz，SC TRAP：ON)
　　クロマ
　　AM：52 dB以上
　　PM：52 dB以上
　(HPF：100Hz，LPF：1MHz)
DG　　：2%以内
DP　　：2°以内
Y／C遅延　：20nsec以内
L・F リニアリティー
　　：3%以下
Kファクター（2Tパルス）
　　：2%以内
出力信号（コンポジットビデオ）
　　：1.0±0.1 Vp-p

オキサイドテープ使用時

帯域　輝度：30Hz～4.1MHz $^{+0.5}_{-6.0}$ dB
　　クロマ：30Hz～1.5MHz $^{+0.5}_{-6.0}$ dB

S／N　輝度：47 dB以上
　(HPF：10kHz，LPF：4.2MHz，SC TRAP：ON)
　　クロマ
　　AM：50 dB以上
　　PM：50 dB以上
　(HPF：100Hz，LPF：500kHz)
DG　　：3%以内
DP　　：3°以内
Y／C遅延　：20nsec以内
L・F リニアリティー
　　：5%以下
Kファクター（2Tパルス）
　　：3%以内
出力信号（コンポジットビデオ）
　　：1.0±0.1 Vp-p

音声系（標準機による基準テープ再生時）

AUDIO OUT（XLR，３ピン）
　＋4 dBm，ローインピーダンス，平衡
　（600Ω負荷時）
HEADPHONES（標準ジャック）
　８Ω，－26 dBs可変（－20 dBs～－50 dBs）
FROM VTR（オーディオ入力，20ピン）
　入力レベル：－10 dBs
　入力インピーダンス：10 kΩ以上

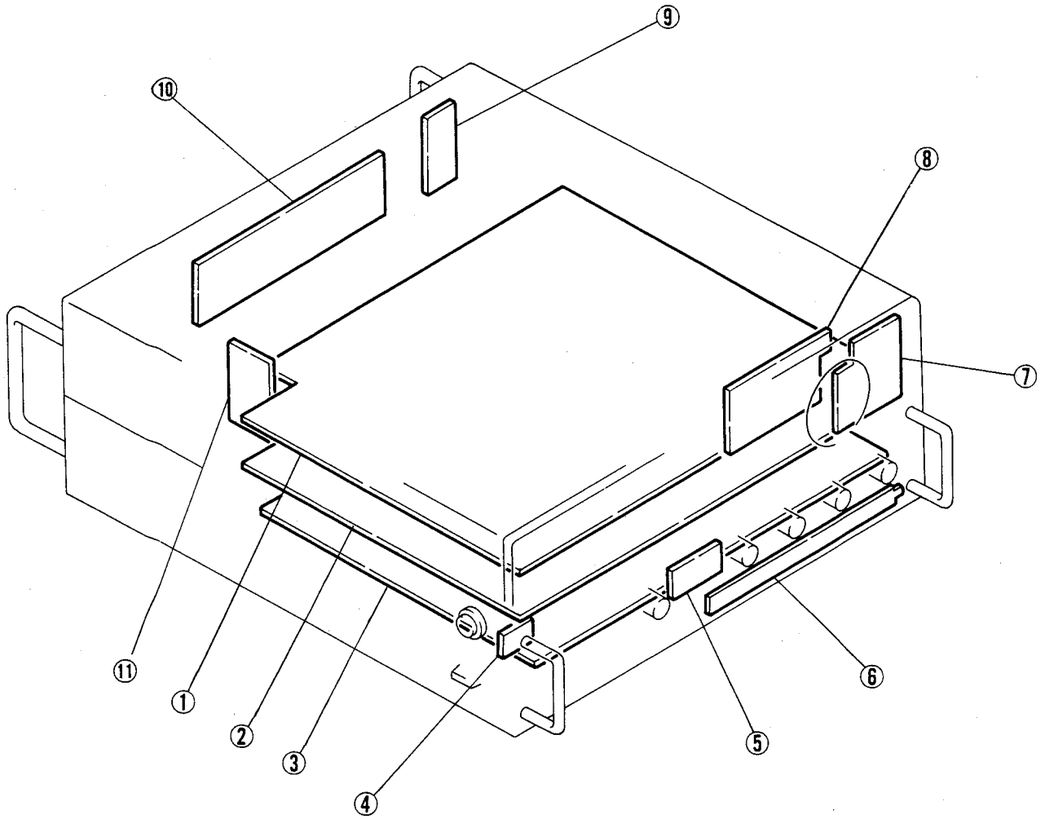
長手方向（音声チャンネル１または２）
メタルテープ使用時

周波数特性　：50Hz～15kHz $^{+1.5}_{-3.0}$ dB
S／N　　：72 dB以上（歪率３%）（CCIR／ARM）
音声歪率　　：1.5%以下（1kHz基準レベル）
クロストーク：－55 dB以下（1kHz基準レベル）
オキサイドテープ使用時（DOLBY NR OFF）
周波数特性　：50Hz～15kHz±3.0 dB
S／N　　：50 dB以上（歪率３%）
音声歪率　　：2.0%以下（1kHz基準レベル）
クロストーク：－55 dB以下（1kHz基準レベル）

AFM（音声チャンネル３または４）

周波数特性　：20Hz～20kHz $^{+0.5}_{-2.0}$ dB
ダイナミックレンジ
　　：80 dB以上
音声歪率　　：0.5%以下（1kHz基準レベル）
クロストーク：－65 dB以下（1kHz基準レベル）

1-2. プリント基板配置図



①PR-103基板
②PR-104基板
③AU-99基板
④SW-243基板
⑤SW-244基板
⑥SW-234基板
⑦SW-235基板
⑧MT-42基板
⑨SW-255基板
⑩CN-214基板
⑪CN-228基板

1-3. プリント基板一覧表

システム	基板名	機　能
VIDEO	PR-103	Video RF Demodulator
	DL-19	CCD 1H Delay Line
	DM-64	Limiter
	EQ-21	Phase Equalizer
	EQ-21A	Phase Equalizer
	FM-13	Field Memory
	PA-72	RF Amp
	PA-72A	RF Amp
	TG-37	Timing Generator
	VA-69	Video Amp and Switcher
	PR-104	CTDM Expander and Chroma Encode, Y／C Mix
	DL-18	Chroma 1／2H Delay Line
	DL-18A	Chroma 1H Delay Line
	NR-27	Noise Reduction
AUDIO	AU-99	Audio System
OTHER	CN-214	BNC Relay Board
	CN-228	RF Modulator Connection Board
	MT-42	Audio Mix Meter
	SW-234	Audio Monitor Select Switch
	SW-235	Audio Mix Switch
	SW-243	Power Switch Control
	SW-244	DOLBY ON／OFF Switch
	SW-255	75 ohm Terminate Switch
	DC-DC CONV.	DC-DC Converter

1-4. 接続コネクター

サービス時において，コネクターパネル部の各種コネクターにケーブルを接続する際には，その先端に次に記すコネクター，またはその同等品を使用して下さい。

パネル表示	接続コネクター
FROM VTR	1-566-771-11 PLUG, 20P, MALE
SC IN	1-560-069-11 PLUG, BNC, MALE
ADV SYNC IN	1-560-069-11 PLUG, BNC, MALE
VIDEO OUT 1／2	1-560-069-11 PLUG, BNC, MALE
VHF OUT	1-506-305-00 PLUG, F type
DC IN 12V	1-508-362-00 PLUG, XLR, 4P, FEMALE
AUDIO OUT	1-508-084-00 CONNECTOR, XLR, 3P, MALE

1-5. コネクターの入／出力信号

コネクターパネル部，フロントパネル部の主なコネクターの入／出力信号は次の通りです。

INPUT

ADV SYNC IN　　：2.0 Vp-p　75Ω 不平衡 同期負
SC IN　　：1.0 Vp-p　75Ω 不平衡
FROM VTR（オーディオ入力）
　入力レベル　　：－10 dBs
　入力インピーダンス：10 kΩ以上

OUTPUT

VIDEO OUT1／2　　：1.0 Vp-p　75Ω 不平衡 同期負
VHF OUT　　：2チャンネル
（チャンネル切換え可）
HEADPHONES　　：8Ω，－26 dBs可変（－20dBs～－50dBs）

1-6. セレクトスイッチのセッティング

フロントパネル部，およびコネクターパネル部にあるセレクトスイッチ以外に，ケースを外すと，セット内に下記のセレクトスイッチがあります。必要な場合に使用システムに合わせて切り換えて下さい。

1. RFモジュレーターの切換スイッチ
VA-500を使用する地域で放送の行われていないテレビチャンネル（1チャンネルまたは2チャンネル）に切り換えて下さい。

工場出荷時：2チャンネル（2）

1-7. 付属アクセサリー

VA-500に付属しているアクセサリーは次の通りです。

1. 20ピンマルチケーブル
BVV-5及びBVW-200（ビデオカセットレコーダー）との接続用です。両端のコネクターの部分が同じなのでどちらに差し込んでも使用できます。

2. ショルダーベルト
VA-500を持ち運びする時などに使用します。

SECTION 1
TECHNICAL INFORMATION

1-1. SPECIFICATIONS

General

Power requirement
: DC 12V $^{+5.0}_{-1.5}$ V

Power consumption
: 15W

Operating temparature
: 0°C to 40°C

Operating humidity
: Less than 85% (relative humidity)

Storage temparature
: -20°C to +60°C

Weight : 2 kg

Dimensions : 212 x 88 x 222 mm (w/h/d)
Approx. not including projection parts

Video (Specifications on video is based on "playback with standard playback machine".)

Color system : VA-500 : NTSC

VIDEO OUT 1/2 (BNC x 2)
: 1.0 Vp-p, 75 ohms, unbalanced sync negative

ADV SYNC IN (BNC)
: 2.0 Vp-p, 75 ohms, unbalanced sync negative

SC IN (BNC) : 1.0 Vp-p, 75 ohms, unbalanced

VHF OUT (F type)
: For TV channel 4 (adjustable to channel 3)

With a metal particle tape

Bandwidth

Luminance : 30 Hz - 4.5 MHz $^{+0.5}_{-6.0}$ dB

Chrominance : 30 Hz - 1.5 MHz $^{+0.5}_{-6.0}$ dB

S/N

Luminance : More than 48 dB
(HPF : 10 kHz, LPF : 4.2 MHz, SC TRAP : ON)

Chrominance

AM : More than 52 dB

PM : More than 52 dB

(HPF : 100 Hz, LPF : 1 MHz)

DG : Less than 2%

DP : Less than 2°

Y/C delay : Less than 20 nsec

L.F linearity : Less than 3%

K factor (2T pulse)
: Less than 2%

Output signal (Composite Video)
: 1.0 ± 0.1 Vp-p

With an oxide tape

Bandwidth

Luminance : 30 Hz - 4.1 MHz $^{+0.5}_{-6.0}$ dB

Chrominance : 30 Hz - 1.5 MHz $^{+0.5}_{-6.0}$ dB

S/N

Luminance : More than 47 dB
(HPF : 10 kHz, LPF : 4.2 MHz, SC TRAP : ON)

Chrominance

AM : More than 50 dB

PM : More than 50 dB

(HPF : 100 Hz, LPF : 500 kHz)

DG : Less than 3%

DP : Less than 3°

Y/C delay : Less than 20 nsec

L.F linearity : Less than 5%

K factor (2T pulse)
: Less than 3%

Output signal (Composite Video)
: 1.0 ± 0.1 Vp-p

Audio (Specifications on audio is based on "playback with standard playback machine".)

AUDIO OUT (XLR, 3-pin)
: +4 dBm, balanced(600 ohms load), low impedance

HEADPHONES (Phone jack)
: 8 ohms, -26 dBs variable (-20 dBs to -50 dBs)

FROM VTR (Audio input, 20-pin)

Input Level : -10 dBs

Input impedance
: More than 10 k ohms

Audio channel 1 or 2 (LNG)

With a metal particle tape

Frequency response
: 50 Hz - 15 kHz $^{+1.5}_{-3.0}$ dB

S/N : More than 72 dB (3% distortion) (CCIR/ARM)

Distortion : Less than 1.5% (1 kHz reference level)

Cross talk : Less than -55 dB (1 kHz reference level)

With an oxide tape (DOLBY NR OFF)

Frequency response
: 50 Hz - 15 kHz ±3.0 dB

S/N : More than 50 dB (3% distortion)

Distortion : Less than 2.0% (1 kHz reference level)

Cross talk : Less than -55 dB (1 kHz reference level)

Audio channel 3 or 4 (AFM)

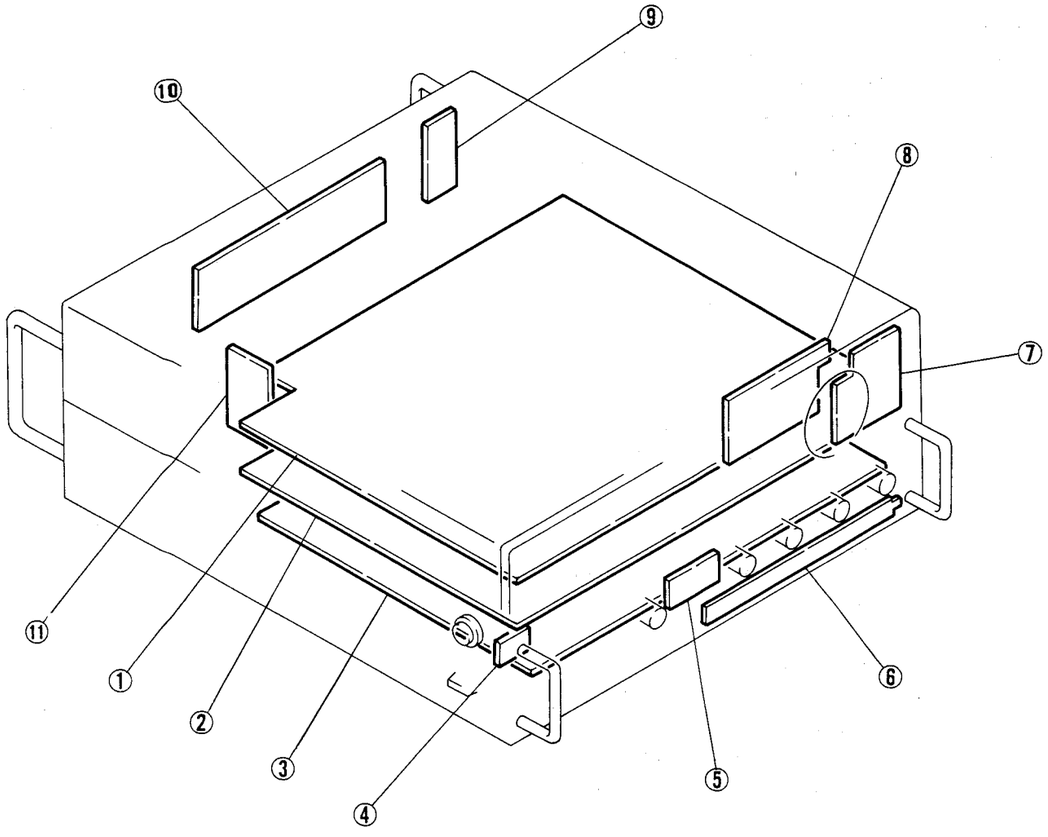
Frequency response
: 20 Hz - 20 kHz $^{+0.5}_{-2.0}$ dB

Dynamic range : More than 80 dB

Distortion : Less than 0.5% (1 kHz reference level)

Cross talk : Less than -65 dB (1 kHz reference level)

1-2. LOCATION OF THE PRINTED CIRCUIT BOARDS



① PR-103 Board
② PR-104 Board
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⑦ SW-235 Board
⑧ MT-42 Board
⑨ SW-255 Board
⑩ CN-214 Board
⑪ CN-228 Board

1-3. PRINTED CIRCUIT BOARDS

The circuit information is provided below.

System	Board	Circuit function
VIDEO	PR-103	Video RF Demodulator
	DL-19	CCD 1H Delay Line
	DM-64	Limiter
	EQ-21	Phase Equalizer
	EQ-21A	Phase Equalizer
	FM-13	Field Memory
	PA-72	RF Amp
	PA-72A	RF Amp
	TG-37	Timing Generator
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OTHERS	CN-214	BNC Relay Board
	CN-228	RF Modulator Connection Board
	MT-42	Audio Mix Meter
	SW-234	Audio Monitor Select Switch
	SW-235	Audio Mix Switch
	SW-243	Power Switch Control
	SW-244	DOLBY ON/OFF Switch
	SW-255	75 ohm Terminate Switch
	DC-DC CONV.	DC-DC Converter

1-4. CONNECTION CONNECTOR

When external cables are connected to the connectors on the connector panel during maintenance, the hardware listed below (or equivalents) must be used.

Panel indication	Connection connector
FROM VTR	1-566-771-11 PLUG, 20P, MALE
SC IN	1-560-069-11 PLUG, BNC, MALE
ADV SYNC IN	1-560-069-11 PLUG, BNC, MALE
VIDEO OUT 1/2	1-560-069-11 PLUG, BNC, MALE
VHF OUT	1-506-305-00 PLUG, F type
DC IN 12V	1-508-362-00 PLUG, XLR, 4P, FEMALE
AUDIO OUT	1-508-083-00 CONNECTOR, XLR, 3P FEMALE

1-5. INPUT/OUTPUT SIGNAL OF THE CONNECTOR

The input and output signals of the main connectors on the Front and Connector Panels are as follows:

INPUT

ADV SYNC IN : 2.0 Vp-p, 75 ohms, unbalanced sync negative

SC IN : 1.0 Vp-p, 75 ohms, unbalanced

FROM VTR (Audio input)

Input Level : -10 dBs

Input Impedance : More than 10 k ohms

OUTPUT

Color system : VA-500 : NTSC

VIDEO OUT 1/2 : 1.0 Vp-p, 75 ohms, unbalanced sync negative

VHF OUT : For TV channel 4 (adjustable to channel 3)

HEADPHONES : 8 ohms, -26 dBs, variable (-20 dBs to -50 dBs)

1-6. SELECT SWITCH SETTING

Along with the select switches on the Front and Connector Panels, the switch listed below is in the unit under the Top Case.
This switch must be set according to operating condition.

1. Channel Select Switch of the RF Modulator
   Set the channel select switch of RF Modulator to an inactive channel, 3 or 4.
   When this unit is shipped, this switch is set to 4.

1-7. SUPPLIED ACCESSORY

Supplied VA-500 accessories are as follows:

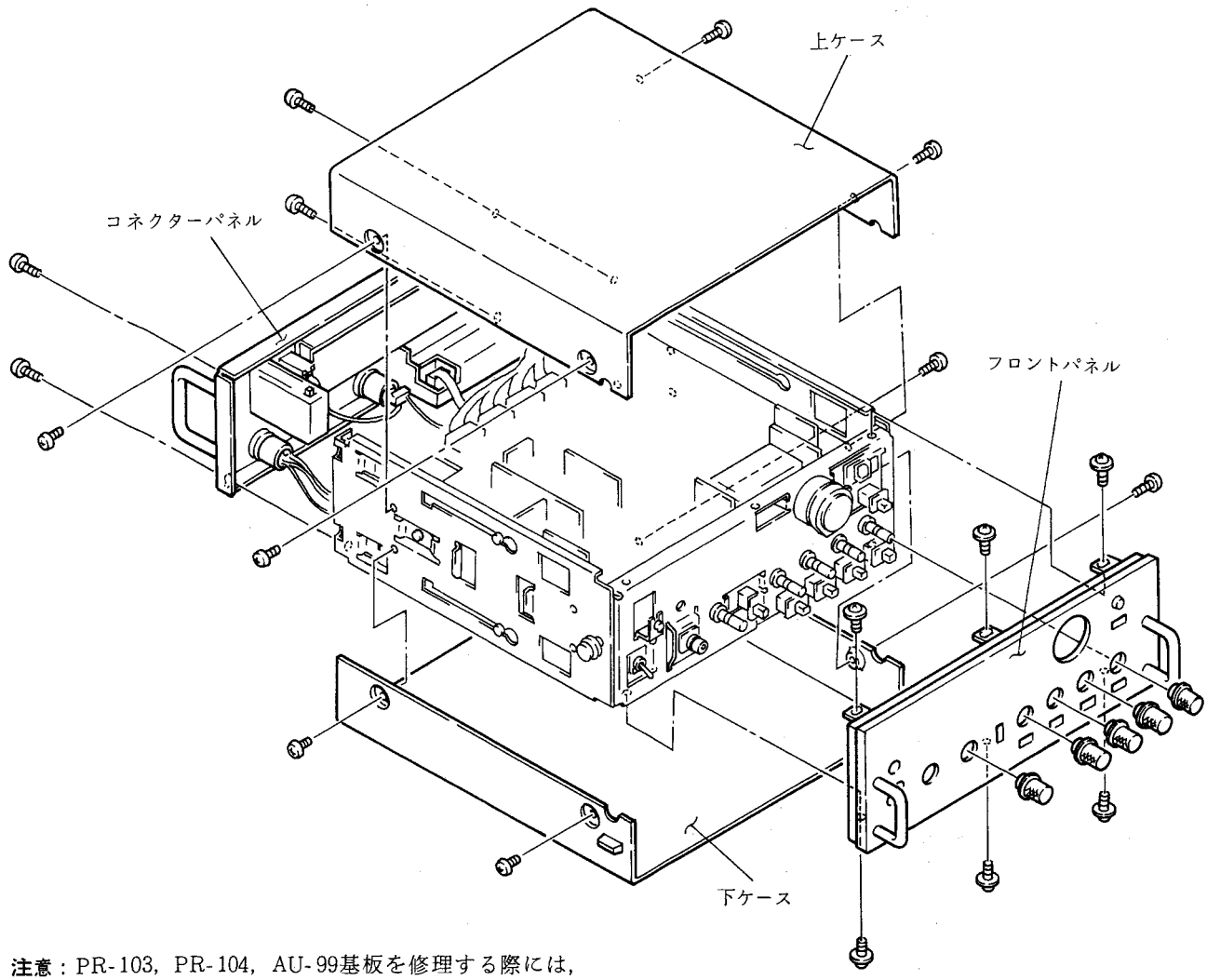
1. 20-pin multi-cable
   The 20-pin multi-cable is used for connecting with BVV-5 or BVW-200 (Video Cassette Recorder). Both ends of the connector are same, and the 20-pin multi-cable can be used with connecting each side.

2. Shoulder belt
   When the VA-500 is carried, the shoulder belt is used.

第 2 章
サービスインフォメーション

2-1. 外装の取り外し

- ●上ケース　：4本の取り付けネジを外し，上ケースを取り外す。
- ●下ケース　：4本の取り付けネジを外し，下ケースを取り外す。
- ●フロントパネル　：上ケースと下ケースを取り外す。5つのコントロールつまみを外す。6本の取り付けネジを外し，フロントパネルを取り外す。
- ●コネクターパネル：4本の取り付けネジを外し，コネクターパネルを取り外す。



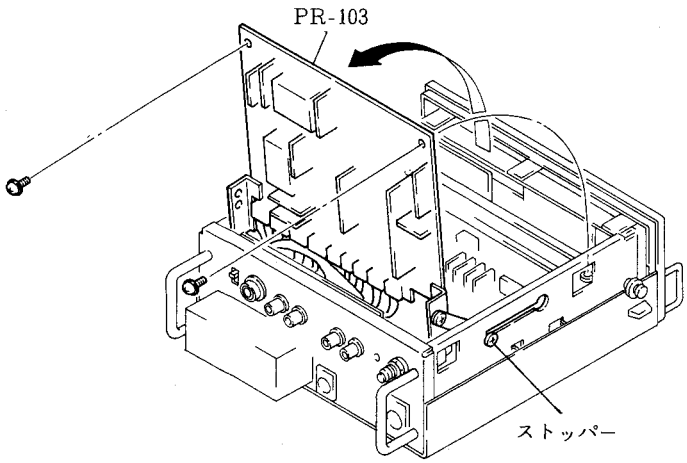
注意：PR-103，PR-104，AU-99基板を修理する際には，フロントパネルとコネクターパネルを取り外す必要はありません。

2-2. 主要基板のサービス方法

修理時には，必ずビデオカセットレコーダーBVV-5及びBVW-200を接続し，行うこと。また，必要に応じて，それぞれのコネクターを接続すること。

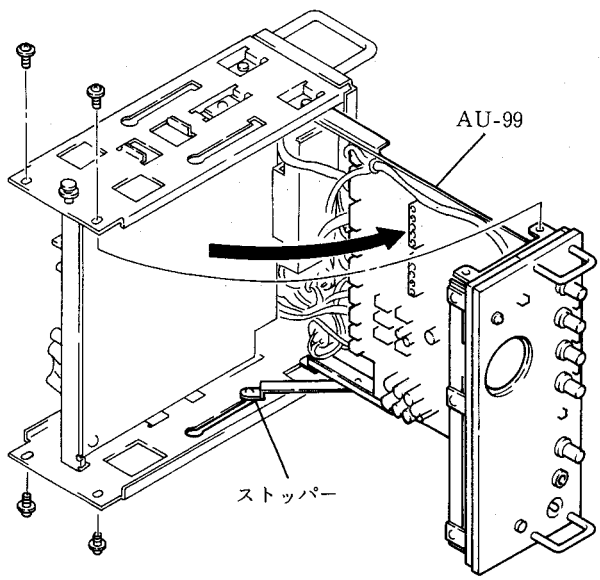
(1) PR-103基板のサービス

- 上ケースを取り外す。
- 図に示す2本の取り付けネジを外し，PR-103基板を矢印方向に開く。



(2) AU-99基板のサービス

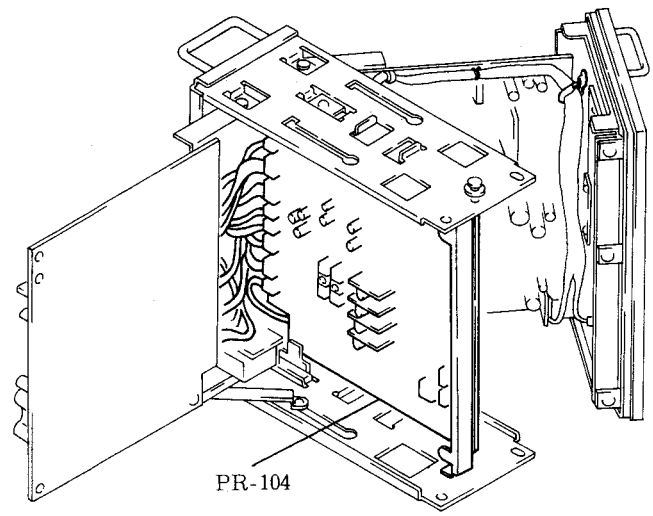
- 上ケースと下ケースを取り外す。
- 側面の取り付けネジ4本（片側2本ずつ）を外し，左側面を下にして置く。
- AU-99基板を矢印方向に開く。



注意：PR-103，AU-99基板を開いた時，側面の図に示すストッパーで基板はロックされる。閉じる時は，ロックを解除すること。

(3) PR-104基板のサービス

- PR-103，AU-99基板を開く。



但し，部品面のみをチェック，または修理時には，PR-103基板のみを開けばよい。

2-3. サービス部品

(1) 安全重要部品
回路図，分解図，電気部品リスト中で ⚠ 印及び▒▒で囲まれた部品は安全性を維持するために重要な部品です。従ってこれらの部品を交換する時には，必ず指定の部品と交換してください。

(2) パーツセンターから供給される部品は，実際にセットに使用している部品と形状等が異なることが時々あります。これらは，「部品の共通化」等によるものです。

(3) 分解図，電気部品リスト中，SP欄がSで示されている部品は常時在庫します。SP欄がOで示されている部品は交換頻度が低い部品ですので在庫していないことがあり，納期が長くなることがあります。

SECTION 2
SERVICE INFORMATION

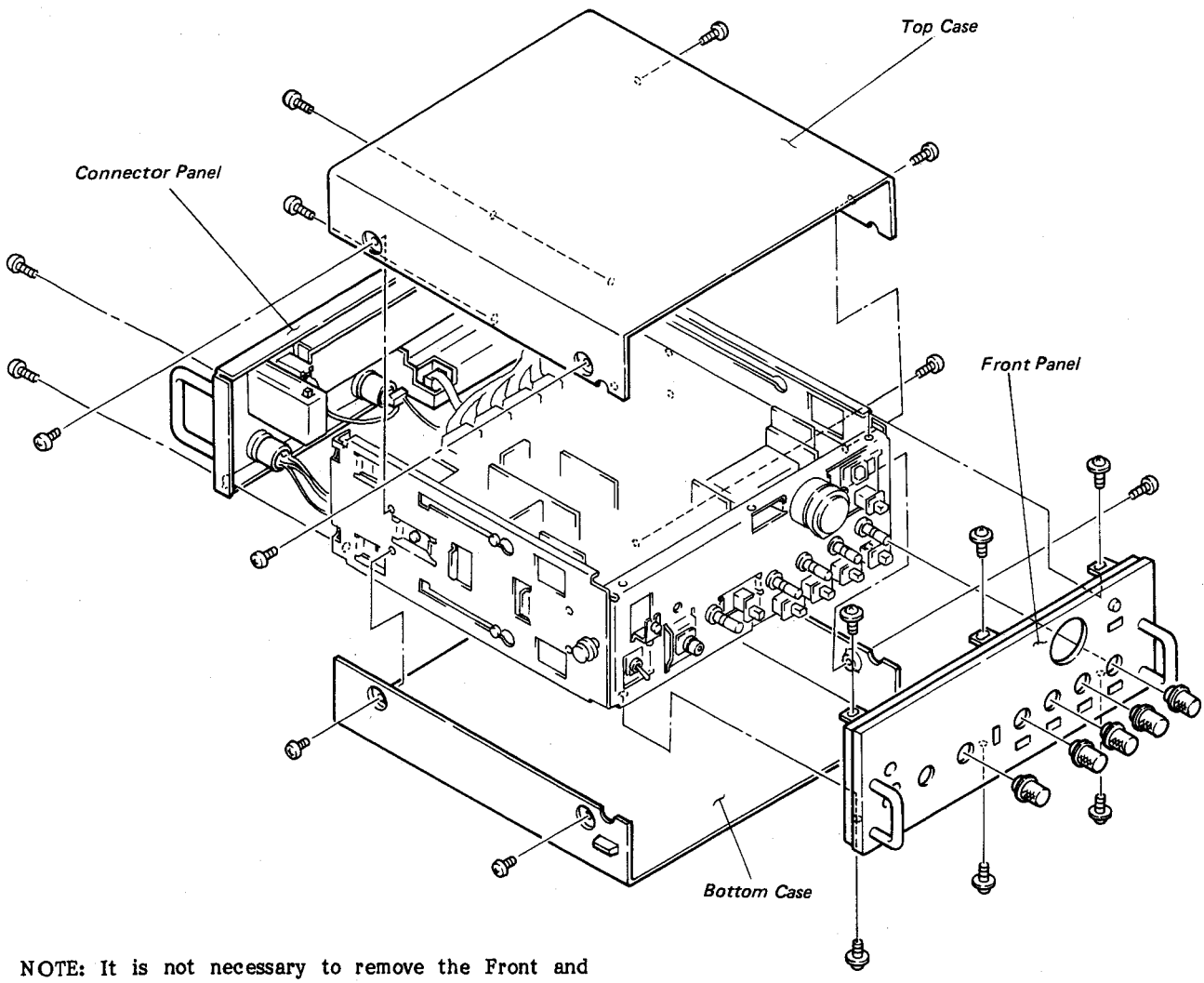
2-1. REMOVAL OF THE CABINETS

. Top Case : Remove the four fixing screws and then remove the Top Case.

. Bottom Case : Remove the four fixing screws and then remove the Bottom Case.

. Front Panel : After removing the Top and Bottom Cases, remove the five control knobs and the six fixing screws and then remove the Front Panel.

. Connector Panel : Remove the four fixing screws and then remove the Connector Panel.



NOTE: It is not necessary to remove the Front and Connector Panels for the maintenance of the PR-103, PR-104 and AU-99 boards.

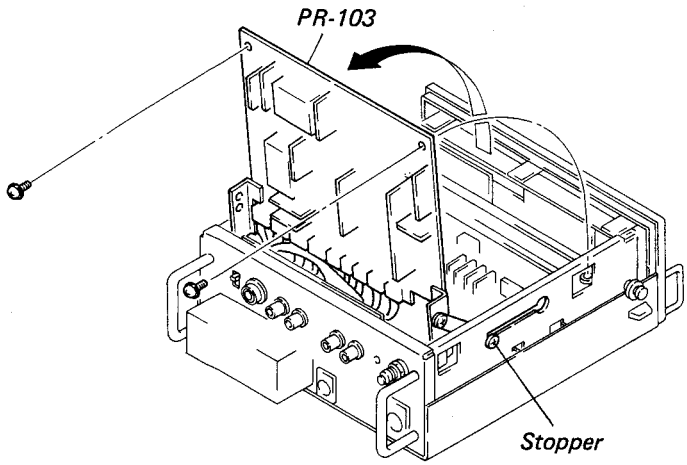
2-2. SERVICE OF THE MAIN PRINTED CIRCUIT BOARD

When repairing or checking this unit, it is necessary to connect the video cassette recorder BVV-5 or BVW-200. In addition, connect each connectors as the need.

(1) Service of the PR-103 Printed Circuit Board

. Remove the Top Case.

. Remove the two fixing screws shown in the figure, then open the PR-103 board in the direction of the arrow.

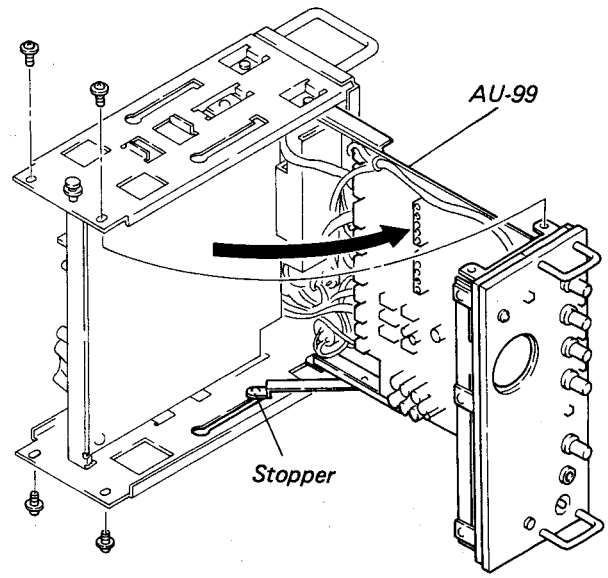


(2) Service of the AU-99 Printed Circuit Board

. Remove the Top and Bottom Cases.

. Remove the four fixing screws on the left and right sides (two screws on each side) and set the unit on its left side.

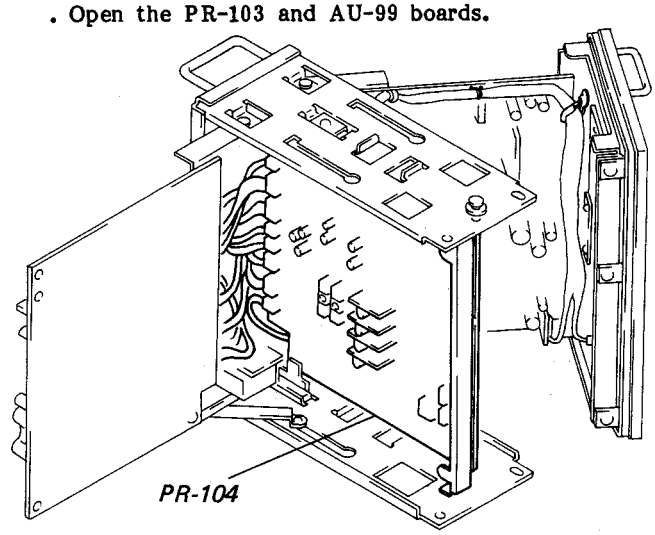
. Open the AU-99 board in the direction of the arrow.



NOTE: When opening the PR-103 and AU-99 boards, these boards are locked with the stoppers shown in the figure. When closing, release these locks.

(3) Service of the PR-104 Printed Circuit Board

. Open the PR-103 and AU-99 boards.



When checking or repairing the component side of the PR-104 board, open only the PR-103 board.

2-3. SPARE PARTS

1.

The shaded and ⚠ -marked components are critical to safety.
Replace only with the same components as specified.

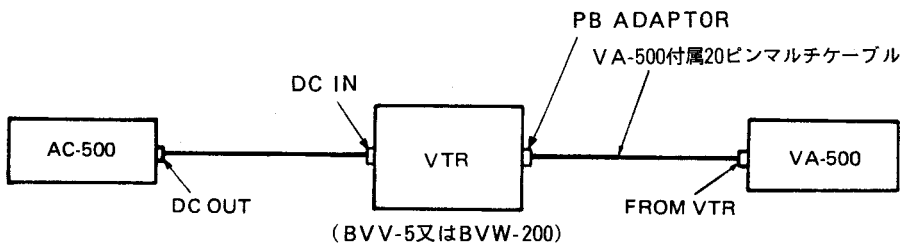
2. Replacement parts supplied from the Sony Parts Center will sometimes have a shape different from the original parts. These differences are for improved parts and/or engineering changes or standardization of genuine parts.
   . This manual's exploded views and electrical spare parts list indicate the part numbers of the standardized genuine parts at the present time. Parts list indicate the part numbers of the standardized genuine parts at the present time.
   . Regarding engineering part changes in our engineering department, refer to Sony service bulletins and service manual supplements.
3. The parts marked with "s" in the SP column of the exploded views and electrical spare parts lists are normally stocked for replacement purposes. The parts marked with "o" in the SP column are not normally required for routine service work. Orders for parts marked with "o" will be processed, but allow for additional delivery time.

第3章
ビデオ系電気調整要項

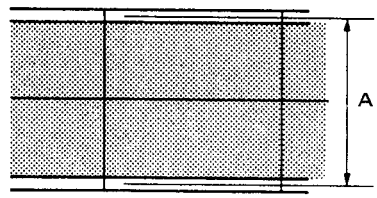
〔使用機器〕

- VTR：BVV-5又はBVW-200（規格値通りに調整されていること）
- AC-500
- 周波数カウンター
- 2現象オシロスコープ
- NTSC信号発生器（TEKTRONIX 1410または相当品）
- ベクトルスコープ（TEKTRONIX 520Aまたは相当品）
- アライメントテープ CR5-1AおよびCR5-1B
- 波形モニター（TEKTRONIX 1485または相当品）
- モニターテレビ

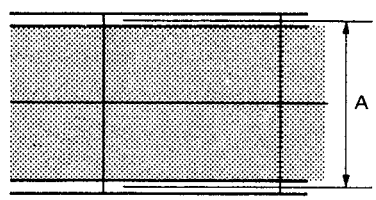
［接続図］



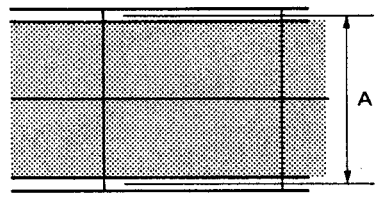
3-1. Y-RFレベル調整（OXIDE）

調整時の状態	規格	調整箇所
● VTRにアライメントテープCR 5-1Aを挿入し，パルス&バー信号部を再生する。	TP100／PR-103（A-4）  A＝0.5±0.02Vp-p TRIG：TP108／PR-103（B-3）	◐RV601／PA-72A （A-4／PR-103）

3-2. Y-RFレベル調整（METAL）

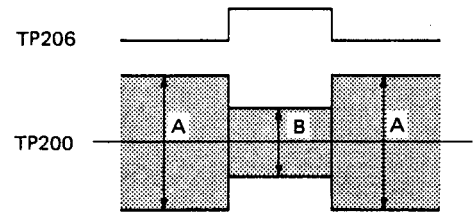
調整時の状態	規格	調整箇所
● VTRにアライメントテープCR 5-1Bを挿入し，パルス&バー信号部を再生する。	TP100／PR-103（A-4）  A＝0.5±0.02Vp-p TRIG：TP108／PR-103（B-3）	◐RV602／PA-72A （A-4／PR-103）

3-3. Y-AGCレベル調整

調整時の状態	規格	調整箇所
● VTRにアライメントテープCR 5-1Bを挿入し，パルス&バー信号部を再生する。	TP101／PR-103（A-5）  A＝0.5±0.02Vp-p TRIG：TP108／PR-103（B-3）	◐RV106／PR-103（B-5）

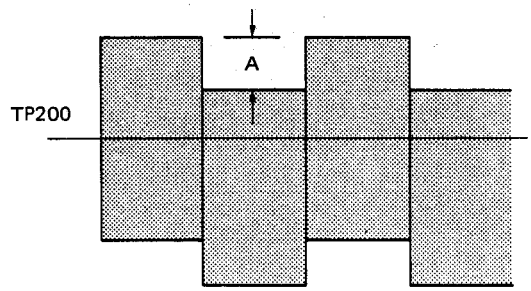
3-4. C-RFバランス／レベル調整

この調整は，BVV-5を接続した時のみ行って下さい。

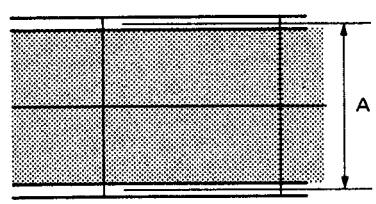
調整時の状態	規格	調整箇所
● BVV-5にアライメントテープCR5-1Bを挿入し，カラーバー信号部を再生する。	TP200／PR-103（D-3） TP206／PR-103（C-3） CHOPモード  A＝B＝0.5±0.02Vp-p TRIG：TP206／PR-103（C-3）	◐RV601／PA-72（D-2）（Bレベル） ◐RV602／PA-72（D-2）（Aレベル）

3-5. C-RFオフセット調整

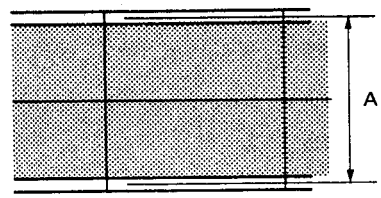
この調整は，BVV-5を接続した時のみ行って下さい。

調整時の状態	規格	調整箇所
●BVV-5にアライメントテープCR5-1Bを挿入し，カラーバー信号部を再生する。	TP200／PR-103（D-3） TP206／PR-103（C-3）　CHOPモード  A＝0 TRIG：TP206／PR-103（C-3）	◐RV200／PR-103（D-2）

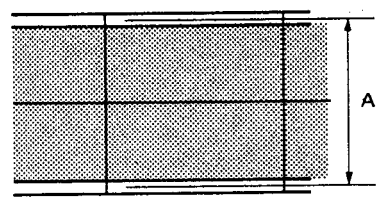
3-6. C-AGCレベル調整

調整時の状態	規格	調整箇所
●VTRにアライメントテープCR5-1Bを挿入し，パルス&バー信号部を再生する。	TP201／PR-103（F-3）  A＝0.5±0.02Vp-p TRIG：TP206／PR-103（C-3）	◐RV204／PR-103（F-2）

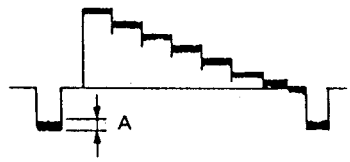
3-7. Y-COS EQレベル調整

調整時の状態	規格	調整箇所
● VTRにアライメントテープCR 5-1Bを挿入し，パルス&バー信号部を再生する。	TP102／PR-103（D-7）  A＝0.25±0.01Vp-p TRIG：TP206／PR-103（C-3）	◐RV607／EQ-21 （A-6／PR-103）

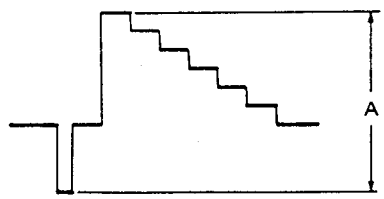
3-8. C-COS EQレベル調整

調整時の状態	規格	調整箇所
● VTRにアライメントテープCR 5-1Bを挿入し，パルス&バー信号部を再生する。	TP202／PR-103（E-4）  A＝0.3±0.01Vp-p TRIG：TP206／PR-103（C-3）	◐RV607／EQ-21A （E-3／PR-103）

3-9. Y-キャリアバランス調整

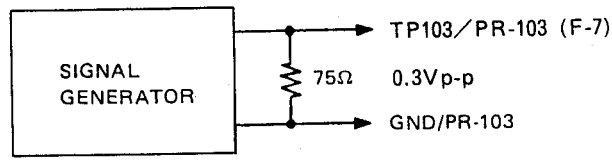
調整時の状態	規格	調整箇所
● VTRにアライメントテープCR 5-1Aを挿入し，カラーバー信号部を再生する。	TP105／PR-103 (I-7)  SYNCチップ部のキャリアリークを最小にする (A≦60mVp-p) TRIG : TP108／PR-103 (B-3)	◐RV608／DM-64 (E-7／PR-103) ◐RV102／PR-103 (C-7) 交互に調整する

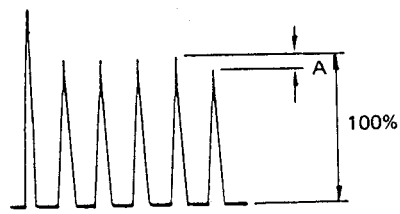
3-10. Y-デモジュレーター出力レベル調整

調整時の状態	規格	調整箇所
● VTRにアライメントテープCR 5-1Bを挿入し，カラーバー信号部を再生する。	TP105／PR-103 (I-7)  A=1.0±0.04Vp-p	◐RV609／VA-69 (H-6／PR-103)

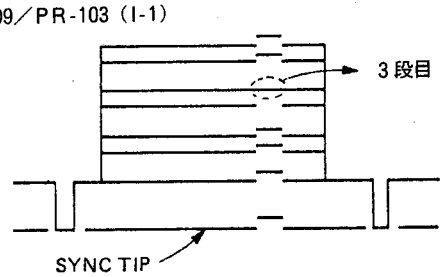
3-11. Y-DO CCD BIAS調整

（接続）

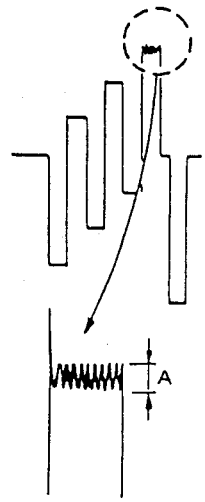


調整時の状態	規格	調整箇所
●SL100／PR-103（F-7）の半田ブリッジを取る。 ●TP103／PR-103 (F-7) に5step信号を入力する。 ●波形モニター：DIFF'D STEPモード ●VTRにブランクテープを挿入し，PLAYモードにする。 ●調整後SL100を元に戻す。	TP104／PR-103（H-7）  A≦4% （フラット又は右下がり）	◐RV610／DL-19 (I-6／PR-103)

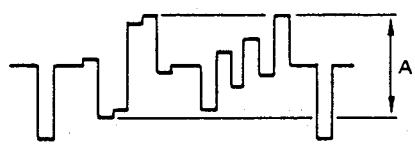
3-12. Y-DO置換レベル調整

調整時の状態	規格	調整箇所
●VTRにアライメントテープCR 5-1Bを挿入し，カラーバー（DO）信号部を再生する。	TP309／PR-103（I-1）  DO部の3段目とSYNC TIPのレベルを合わせる	◐RV104／PR-103 (H-6) ◐RV103／PR-103 (H-7) 交互に調整する

3-13. C-キャリアバランス調整

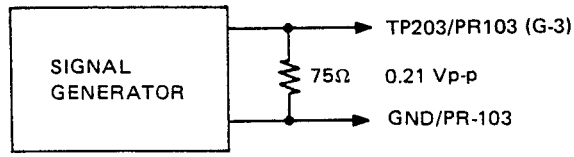
調整時の状態	規格	調整箇所
● VTRにアライメントテープCR 5-1Aを挿入し，カラーバー信号部を再生する。	TP205／PR-103（H-1）  A：最小にする (A≦60mVp-p)	◐RV201／PR-103 (D-4) ◐RV608／DM-64 （G-4／PR-103） 交互に調整する

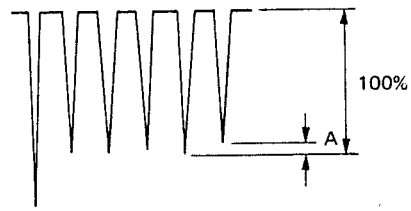
3-14. C-デモジュレーター出力レベル調整

調整時の状態	規格	調整箇所
● VTRにアライメントテープCR 5-1Bを挿入し，カラーバー信号部を再生する。	TP205／PR-103（H-1）  A＝0.7±0.02Vp-p	◐RV609／VA-69 （H-2／PR-103）

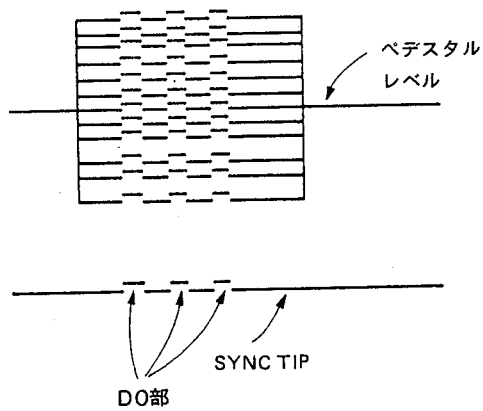
3-15. C-DO CCD BIAS調整

（接続）

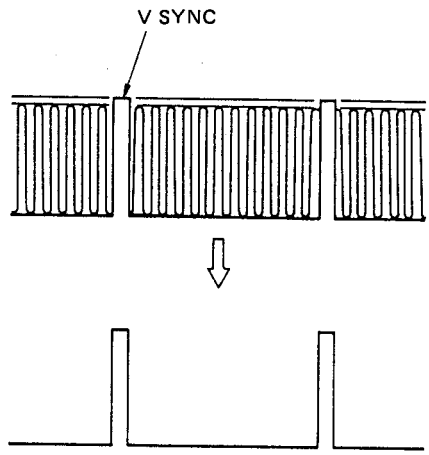


調整時の状態	規格	調整箇所
●SL200／PR-103（G-3）の半固ブリッジを取る。 ●TP203／PR-103 (G-3) に5step信号を入力する。 ●波形モニター：DIFF'D STEPモード ●VTRにブランクテープを挿入し，PLAYモードにする。 ●調整後SL200を元に戻す。	TP204／PR-103（F-1）  A≦4% （フラット又は右上がり）	◐RV610／DL-19 （G-1／PR-103）

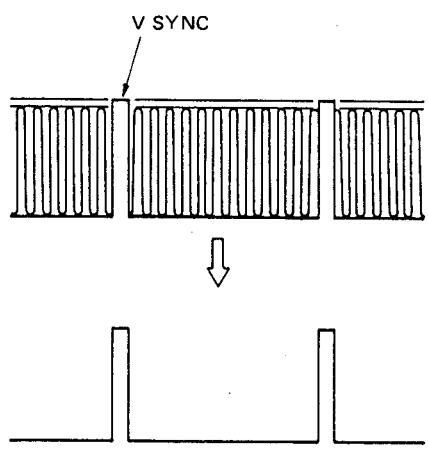
3-16. C-DO置換レベル調整

調整時の状態	規格	調整箇所
●VTRにアライメントテープCR 5-1Bを挿入し，カラーバー（DO）信号部を再生する。	TP205／PR-103（H-1）  DO部分のペデスタルレベルとSYNC TIPレベルを合わせる。	◐RV203／PR-103（F-2） ◐RV202／PR-103（G-2） 交互に調整する

3-17. Y-DO感度調整

調整時の状態	規格	調整箇所
● R164／PR-103（A-6）と並列に180Ωの抵抗（1-215-403-00）を半田付けする。 ● VTRにアライメントテープCR 5-1Bを挿入し，フラットフィールド部を再生する。 ● 調整後，180Ωの抵抗を外す。	TP107／PR-103（C-6） 	⊘RV108／PR-103（B-7）

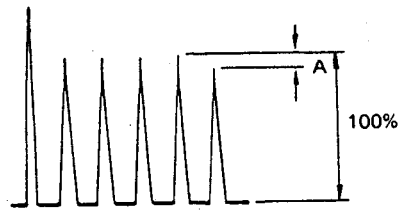
3-18. C-DO感度調整

調整時の状態	規格	調整箇所
● R279／PR-103（E-2）と並列に180Ωの抵抗（1-215-403-00）を半田付けする。 ● VTRにアライメントテープCR 5-1Bを挿入し，フラットフィールド部を再生する。 ● 調整後，180Ωの抵抗を外す。	TP207／PR-103（F-2） 	⊘RV206／PR-103（F-2）

BVW-200を接続した時は，3-18.C-DO感度調整を行った後に，下記の１～４の調整を順次行って下さい。

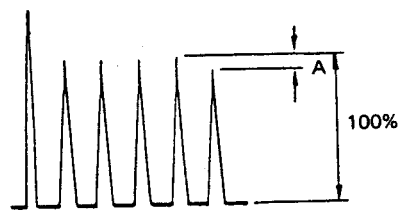
3-19. Y-CCD 1 BIAS調整

この調整は，BVW-200を接続した時のみ行って下さい。

調整時の状態	規格	調整箇所
● BVW-200にアライメントテープCR5-1Bを挿入し，Line 17信号部を再生する。	TP307／PR-103 (I-5)  A≦1.5% （フラット又は右下がり）	◐RV308／PR-103 (I-6)

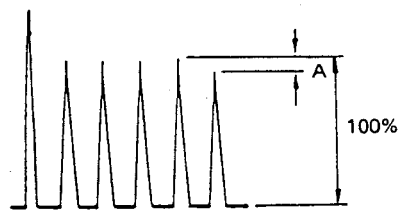
3-20. Y-CCD 2 BIAS調整

この調整は，BVW-200を接続した時のみ行って下さい。

調整時の状態	規格	調整箇所
● BVW-200にアライメントテープCR5-1Bを挿入し，Line 17信号部を再生する。	TP308／PR-103 (I-4)  A≦2.5% （フラット又は右下がり）	◐RV309／PR-103 (I-5)

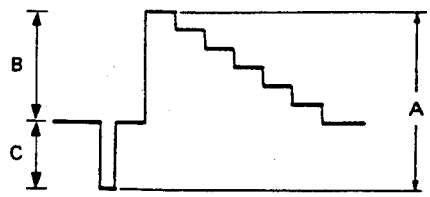
3-21. Y-CCD 3 BIAS調整

この調整は，BVW-200を接続した時のみ行って下さい。

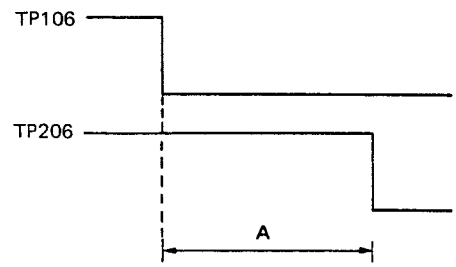
調整時の状態	規格	調整箇所
●BVW-200にアライメントテープCR5-1Bを挿入し，Line 17信号部を再生する。	TP309／PR-103（I-1）  A≦3.5% （フラット又は右下がり）	◐RV310／PR-103（I-4）

3-22. Y-CCD 3 出力調整

この調整は，BVW-200を接続した時のみ行って下さい。

調整時の状態	規格	調整箇所
●BVW-200にアライメントテープCR5-1Bを挿入し，カラーバー信号部を再生する。	TP309／PR-103（I-1）  A＝1.00±0.01Vp-p B＝0.72±0.01Vp-p C＝0.28±0.01Vp-p 規格を満足しない時は，3-19. Y-CCD 1 BIAS調整，3-20. Y-CCD 2 BIAS調整，3-21. Y-CCD 3 BIAS調整を再び行って下さい。	◐RV300／PR-103（H-2）

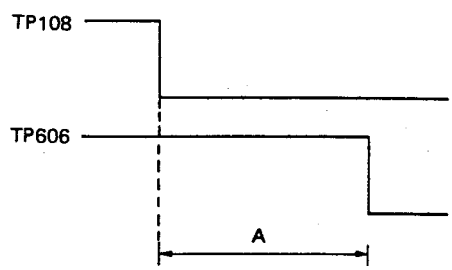
3-23. Cスイッチングパルスディレー調整

調整時の状態	規格	調整箇所
● VTRにアライメントテープCR 5-1Bを挿入し，カラーバー信号部を再生する。	TP106／PR-103（E-4） TP206／PR-103（C-3）  A＝210±10μsec TRIG：TP106／PR-103（B-2）	◐RV105／TG-37 （B-2／PR-103）

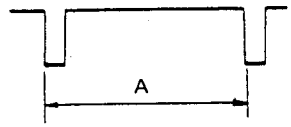
BVW-200を接続した時は，3-19.Cスイッチングパルスディレー調整を行った後に，下記の調整を行って下さい。

3-24. Yスイッチングパルスディレー調整

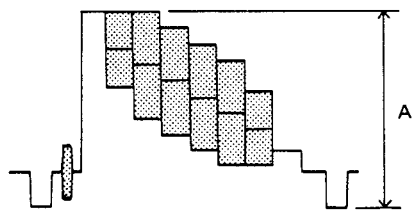
この調整は，BVW-200を接続した時のみ行って下さい。

調整時の状態	規格	調整箇所
● BVW-200にアライメントテープCR5-1Bを挿入し，カラーバー信号部を再生する。	TP108／PR-103（B-3） TP606／PR-103（D-5）  A＝164±4μsec TRIG：TP108／PR-103（B-3）	◐RV602／TG-37 （B-2／PR-103）

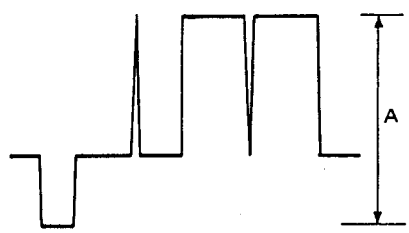
3-25. 疑似H SYNC周波数調整

調整時の状態	規格	調整箇所
● VTRをSTOPモードにする。	TP605／PR-103（D-5）  A=68±1μsec	◐RV601／PR-103（E-5）

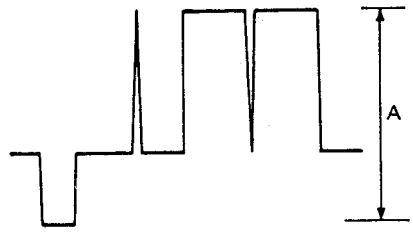
3-26. VIDEO OUTレベル調整

調整時の状態	規格	調整箇所
● VTR の ENCODE VIDEO OUTコネクターにNTSC信号発生器（TEKTRONIX 1410相当）を接続し，カラーバー信号を入力する。 ● MODE : STOP	VIDEO OUTコネクター／VA-500  A＝1.0±0.05Vp-p	◐RV411／PR-104（D-2）

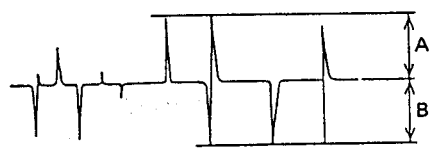
3-27. Y-ノンリニアディエンファシス調整（1）

調整時の状態	規格	調整箇所
● VTRにアライメントテープCR 5-1Aを挿入し，パルス&バー信号部を再生する。	TP305／PR-104（I-4）  A＝1.0±0.05Vp-p	◐RV1／NR-27 （I-4／PR-104）

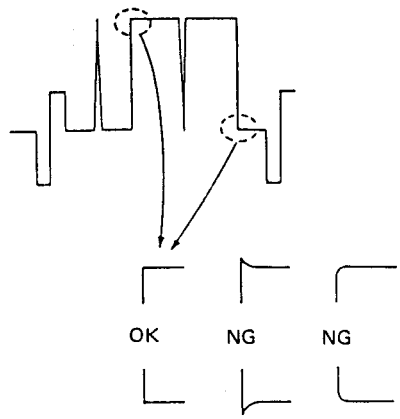
3-28. Y-レベル調整

調整時の状態	規格	調整箇所
● VTRにアライメントテープCR 5-1Bを挿入し，パルス&バー信号部を再生する。	TP305／PR-104 (I-4)  A＝1.0±0.05Vp-p	◐RV307／PR-104 (G-3)

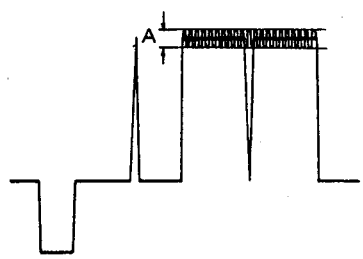
3-29. Y-ノンリニアディエンファシス調整（2）

調整時の状態	規格	調整箇所
● VTRにアライメントテープCR 5-1Bを挿入し，パルス&バー信号部を再生する。	TP304／PR-104 (I-4)  A=B	◐RV3／NR-27 (I-4／PR-104)

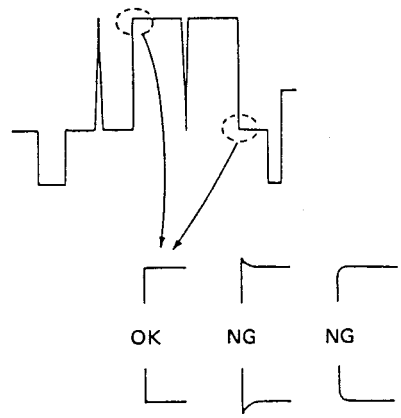
3-30. Y-ノンリニアディエンファシス調整（3）

調整時の状態	規格	調整箇所
●VTRにアライメントテープCR 5-1Bを挿入し，パルス&バー信号部を再生する。	TP305／PR-104 (I-4)  	⊘RV2／NR-27 (I-4／PR-104) ⊘RV4／NR-27 (I-4／PR-104)

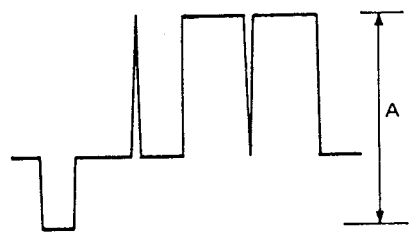
3-31. Y-ノイズキャンセラー調整（1）

調整時の状態	規格	調整箇所
●VTRにアライメントテープCR 5-1Aを挿入し，パルス&バー信号部を再生する。 ●RV7／NR-27（I-4／PR-104）を時計方向一杯に回す。	TP303／PR-104（G-4）  A：最小にする。	⊘RV6／NR-27 (I-4／PR-104) ⊘RV7／NR-27 (I-4／PR-104)

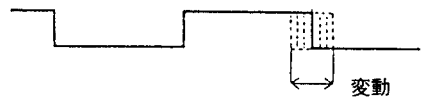
3-32. Y-ノイズキャンセラー調整（2）

調整時の状態	規格	調整箇所
●VTRにアライメントテープCR 5-1Bを挿入し，パルス&バー信号部を再生する。	TP303／PR-104（G-4）  	◐RV7／NR-27 （I-4／PR-104）

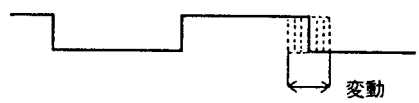
3-33. Y-ノイズキャンセラー出力調整

調整時の状態	規格	調整箇所
●VTRにアライメントテープCR 5-1Aを挿入し，パルス&バー信号部を再生する。	TP303／PR-104（G-4） TP300／PR-104（I-1）  A＝1.0±0.05Vp-p TRIG：INT	◐RV5／NR-27 （I-4／PR-104）

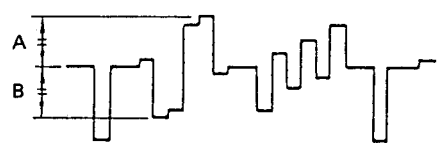
3-34. C-AFC 1／8クロック調整

調整時の状態	規格	調整箇所
● VTRにアライメントテープCR 5-1Bを挿入し，カラーバー信号部を再生する。	TP503／PR-104（D-8）  波形の変動を最小にする。 A＝0±20nsec	◐RV501／PR-104（C-6）

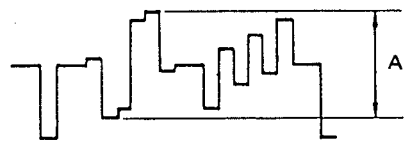
3-35. Y-AFC 1／8クロック調整

調整時の状態	規格	調整箇所
● VTRにアライメントテープCR 5-1Bを挿入し，カラーバー信号部を再生する。	TP502／PR-104（D-8）  波形の変動を最小にする。 A＝0±20nsec	◐RV502／PR-104（C-7）

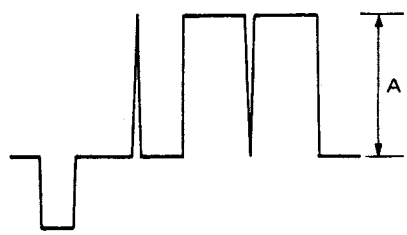
3-36. PRE-φ CCD BIAS調整

調整時の状態	規格	調整箇所
● VTRにアライメントテープCR 5-1Bを挿入し，カラーバー信号部を再生する。	TP100／PR-104（E-5）  $\frac{A}{B}$ = 100 ± 2 %	◐RV1／DL-18A （D-3／PR-104）

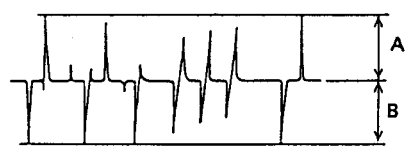
3-37. PRE-φ CCD出力調整

調整時の状態	規格	調整箇所
● VTRにアライメントテープCR 5-1Aを挿入し，カラーバー信号部を再生する。	TP100／PR-104（E-5）  A＝0.7±0.02Vp-p	◐RV100／PR-104（F-6）

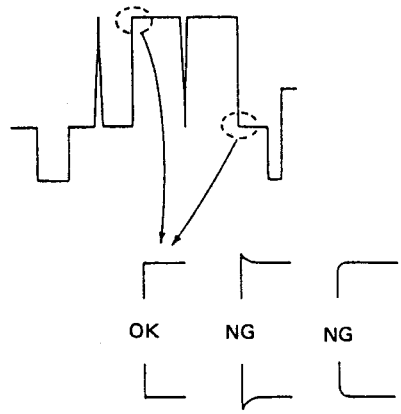
3-38. C-ノンリニアディエンファシス調整（1）

調整時の状態	規格	調整箇所
● VTRにアライメントテープCR 5-1Aを挿入し，パルス&バー信号部を再生する。	TP103／PR-104（E-3）  A＝0.7±0.02Vp-p	◐RV1／NR-27 （E-3／PR-104）

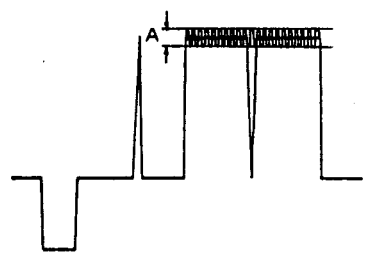
3-39. C-ノンリニアディエンファシス調整（2）

調整時の状態	規格	調整箇所
● VTRにアライメントテープCR 5-1Aを挿入し，カラーバー信号部を再生する。	TP101／PR-104（F-3）  A=B	◐RV3／NR-27 （E-3／PR-104）

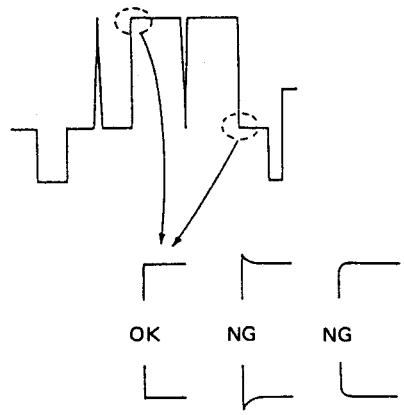
3-40. C-ノンリニアディエンファシス調整（3）

調整時の状態	規格	調整箇所
●VTRにアライメントテープCR 5-1Aを挿入し，パルス&バー信号部を再生する。	TP103／PR-104 (E-3)  	◐RV2／NR-27 （E-3／PR-104） ◐RV4／NR-27 （E-3／PR-104） 交互に調整する

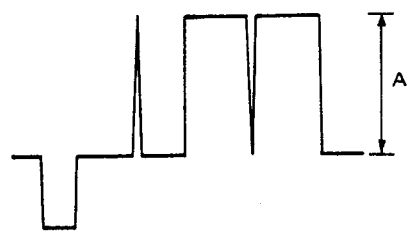
3-41. C-ノイズキャンセラー調整（1）

調整時の状態	規格	調整箇所
●VTRにアライメントテープCR 5-1Aを挿入し，パルス&バー信号部を再生する。 ●RV7／NR-27（E-3／PR-104）を時計方向一杯に回す。	TP102／PR-104（F-5）  A：最小にする	◐RV6／NR-27 （E-3／PR-104） ◐RV7／NR-27 （E-3／PR-104）

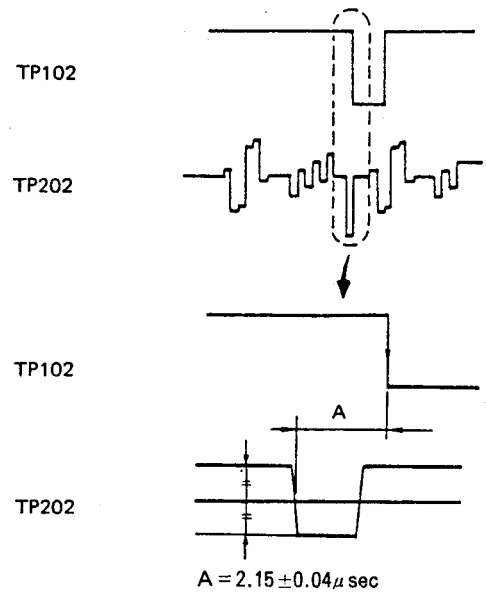
3-42. C-ノイズキャンセラー調整（2）

調整時の状態	規格	調整箇所
●VTRにアライメントテープCR 5-1Aを挿入し，パルス&バー信号部を再生する。	TP102／PR-104（F-5）  	◐RV7／NR-27 （E-4／PR-104）

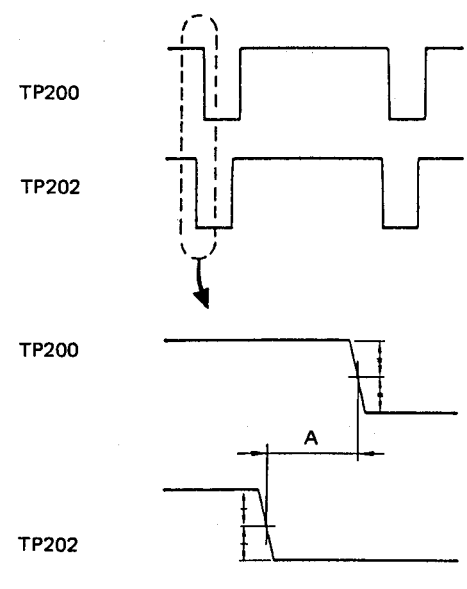
3-43. C-ノイズキャンセラー出力調整

調整時の状態	規格	調整箇所
●VTRにアライメントテープCR 5-1Aを挿入し，パルス&バー信号部を再生する。	TP102／PR-104（F-5）  A＝0.7±0.02Vp-p	◐RV5／NR-27 （E-4／PR-104）

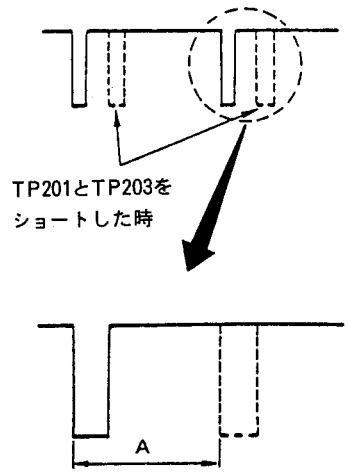
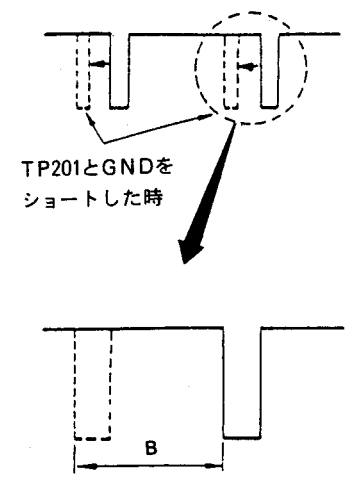
3-44. PRE-φ C-SH調整

調整時の状態	規格	調整箇所
● VTRにアライメントテープCR 5-1Bを挿入し，カラーバー信号部を再生する。	TP102／PR-104（F-5） TP202／PR-104（A-6）  A＝2.15±0.04μsec	◐RV108／PR-104（C-4）

3-45. PRE-φ Y-SH調整

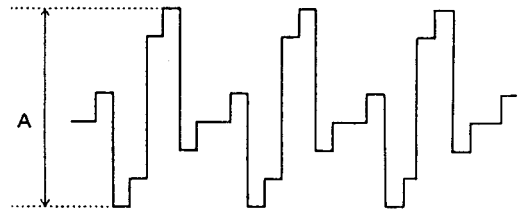
調整時の状態	規格	調整箇所
● VTRにアライメントテープCR 5-1Bを挿入し，カラーバー信号部を再生する。	TP202／PR-104（A-6） TP200／PR-104（D-8）  A＝0.85±0.05μsec	◐RV200／PR-104（B-6）

3-46. PRE-φ リミッタ調整

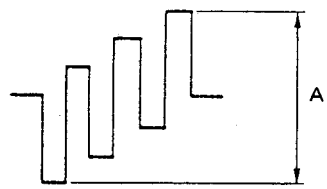
調整時の状態	規格	調整箇所
Step 1. ● VTRにアライメントテープCR 5-1Bを挿入し，カラーバー信号部を再生する。 ● TP201／PR-104（A-6）とTP 203／PR-104（A-6）をショートクリップでショートする。 ● 調整後ショートクリップを外す。	TP200／PR-104（D-8） TP202／PR-104（A-6）  A＝16±1μsec	◎RV202／PR-104（A-4）
Step 2. ● TP201とGNDをショートクリップでショートする。 ● 調整後ショートクリップを外す。	 B＝16±1μsec	◎RV201／PR-104（A-4）

3-47. R-Yレベル調整

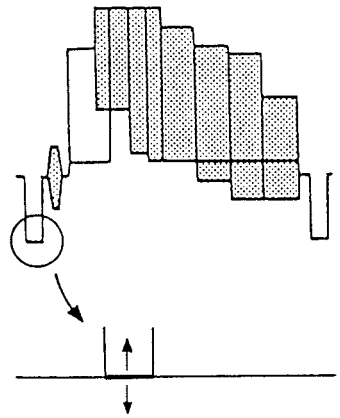
この調整を行う前に3-60. EXP-CCD BIAS調整（1）と3-61. EXP-CCD BIAS調整（2）を行って下さい。

調整時の状態	規格	調整箇所
● VTRにアライメントテープCR 5-1Bを挿入し，カラーバー信号部を再生する。	TP600／PR-104（G-6）  RV600を調整すると，波形は1つおきに動く A＝0.7±0.02Vp-p	⊘RV600／PR-104（F-7） ⊘RV602／PR-104（F-7） 交互に調整する

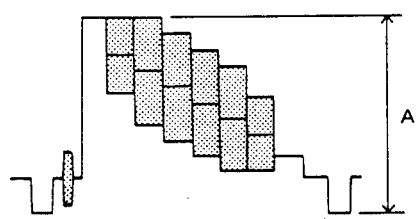
3-48. B-Yレベル調整

調整時の状態	規格	調整箇所
● VTRにアライメントテープCR 5-1Bを挿入し，カラーバー信号部を再生する。	TP601／PR-104（G-7）  RV601を調整すると，波形は1つおきに動く A＝0.7±0.02Vp-p	⊘RV601／PR-104（E-8） ⊘RV605／PR-104（G-8）

3-49. Y SYNCつけかえ調整

調整時の状態	規格	調整箇所
● VTRにアライメントテープCR 5-1Bを挿入し，カラーバー信号部を再生する。	TP412／PR-104（D-1）  H-SYNCのSYNC TIPをV-SYNCのSYNCに一致させる。 0±1.5IRE	◐RV308／PR-104（F-3）

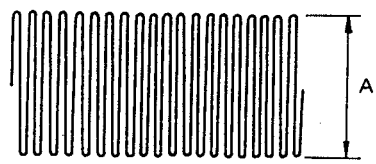
3-50. Y 出力調整

調整時の状態	規格	調整箇所
● VTRにアライメントテープCR 5-1Bを挿入し，カラーバー信号部を再生する。	VIDEO OUTコネクター／VA-500（VIDEO OUTを75Ωで終端する）  A＝1.0±0.02Vp-p	◐RV309／PR-104（E-2）

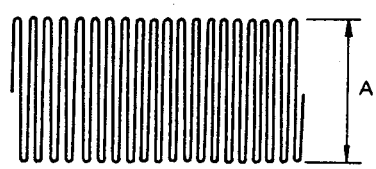
3-51. 3.58MHz OSC調整

調整時の状態	規格	調整箇所
● TP406／PR-104 (I-7) にオシロスコープを接続し，その出力コネクターに周波数カウンターを接続する。 ● VTRにアライメントテープCR 5-1Bを挿入し，カラーバー信号部を再生する。	TP406／PR-104 (I-7) f＝3,579,545±5Hz	◐CV400／PR-104 (I-7)

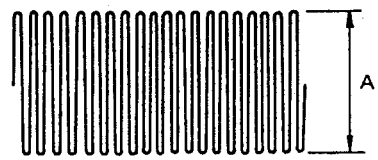
3-52. SC-チューニング調整

調整時の状態	規格	調整箇所
● VTRにアライメントテープCR 5-1Bを挿入し，カラーバー信号部を再生する。	TP407／PR-104 (I-7)  A: 最大にする	◐LV400/PR-104 (H-7)

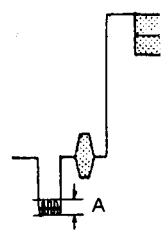
3-53. U-レベル調整

調整時の状態	規格	調整箇所
● VTRにアライメントテープCR 5-1Bを挿入し，カラーバー信号部を再生する。	TP408/PR-104 (H-4)  A=0.6±0.1 Vp-p	◐RV407／PR-104 (H-7)

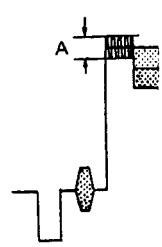
3-54. V-レベル調整

調整時の状態	規格	調整箇所
● VTRにアライメントテープCR 5-1Bを挿入し，カラーバー信号部を再生する。	TP409/PR-104 (H-4)  A=0.6±0.1 Vp-p	⊘RV409／PR-104 (I-7)

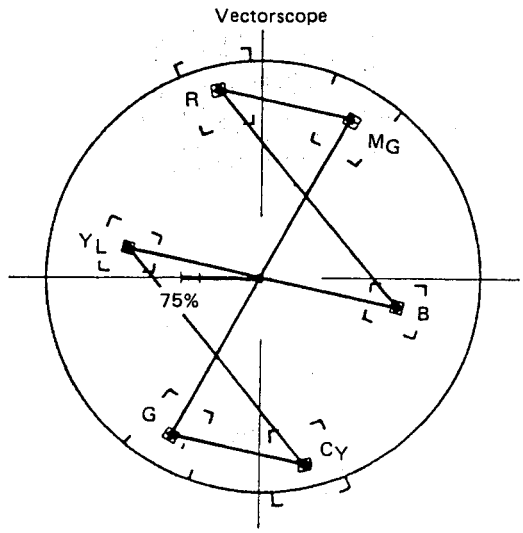
3-55. C-ブランキング調整

調整時の状態	規格	調整箇所
● VTRにアライメントテープCR 5-1Bを挿入し，カラーバー信号部を再生する。	TP412/PR-104 (D-1)  A: 最小にする (A≦20mV)	⊘RV402／PR-104 (F-4) ⊘RV404／PR-104 (F-4) 交互に調整する

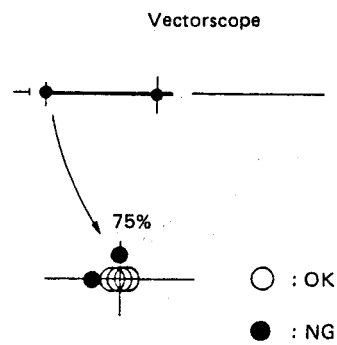
3-56. C-キャリアバランス調整

調整時の状態	規格	調整箇所
● VTRにアライメントテープCR 5-1Bを挿入し，カラーバー信号部を再生する。	TP412/PR-104 (D-1)  A: 最小にする (A≦40mV)	⊘RV401／PR-104 (G-6) ⊘RV403／PR-104 (F-6) 交互に調整する

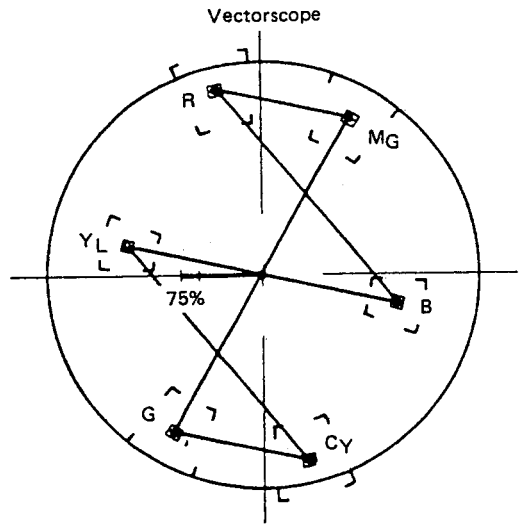
3-57. C-バランス調整

調整時の状態	規格	調整箇所
●SC INコネクター／VA-500をEXT SC INコネクター／ベクトルスコープに外部SC信号を接続する。 ●ベクターのGAINをつまみにて"R"と"C_Y"を"⊞"の中に入る様にレベルを調整する。	VIDEO OUTコネクター／VA-500  全ての輝点を⊞の中に入れる	◐RV400／PR-104 (G-6) ◐RV408／PR-104 (I-6) 交互に調整する

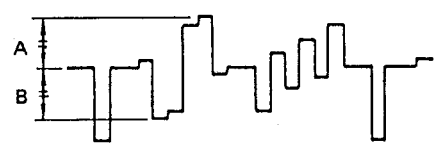
3-58. バーストレベル調整

調整時の状態	規格	調整箇所
● VTRにアライメントテープCR 5-1Bを挿入し，カラーバー信号部を再生する。 ●ベクターのGAINをCALにする。	VIDEO OUTコネクター／VA-500  	◐RV406／PR-104 (F-1)

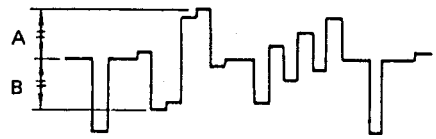
3-59. クロマレベル調整

調整時の状態	規格	調整箇所
● VTRにアライメントテープCR 5-1Bを挿入し，カラーバー信号部を再生する。	VIDEO OUTコネクター／VA-500  全ての輝点を⊞の中に入れる	◐RV410／PR-104 (G-4)

3-60. EXP-CCD BIAS調整（1）

調整時の状態	規格	調整箇所
● VTRにアライメントテープCR 5-1Bを挿入し，カラーバー信号部を再生する。	TP600/PR-104 (G-6)  $\frac{A}{B}$=100±2%	◐RV1／DL-18 （E-7／PR-104） ◐RV1／DL-18 （E-7／PR-104）

3-61. EXP-CCD BIAS調整（2）

調整時の状態	規格	調整箇所
● VTRにアライメントテープCR 5-1Bを挿入し，カラーバー信号部を再生する。	TP601/PR-104 (G-7)  $\frac{A}{B}$=100±2%	◐RV1／DL-18 (E-8／PR-104) ◐RV1／DL-18 (E-6／PR-104)

3-62. Y／Cディレー調整

本機の再生機能は，標準VTRで充分保証されておりますが，VTR（BVV-5又はBVW-200）との接続上，Y／Cディレーが発生する可能性があります。その時には下記の通り調整して下さい。

調整時の状態	規格	調整箇所
● VTRにアライメントテープCR 5-1Bを挿入し，カラーバー信号部を再生する。	VIDEO OUT 1 または 2 コネクター／VA-500  0±20nsec	◐RV600／PR-103 (E-5)

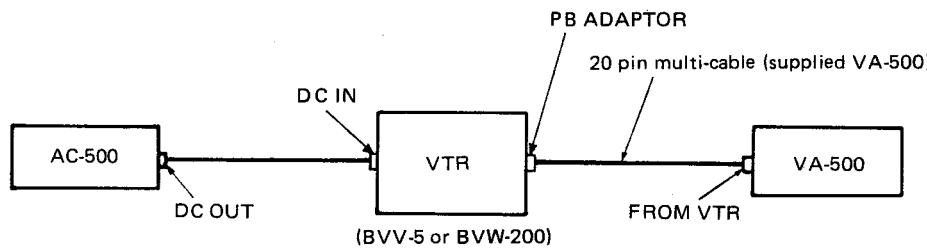
注）● 自走タイミング調整
◐RV500／PR-104 (B-4) をメカニカルセンターに調整する。

SECTION 3
VIDEO SYSTEM ALIGNMENT

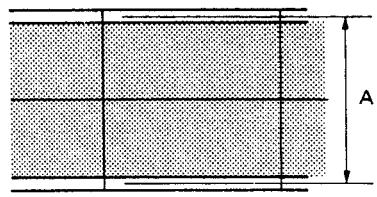
[Equipment Required]

- VTR : BVV-5 or BVW-200 (Should be adjusted correctly)
- AC-500
- Frequency counter
- Dual-trace oscilloscope
- NTSC signal generator (TEKTRONIX 1410 or equivalent)
- Vector scope (TEKTRONIX 520A or equivalent)
- Alignment tapes CR5-1A and CR5-1B
- Waveform Monitor (TEKTRONIX 1485 or equivalent)
- Monitor TV

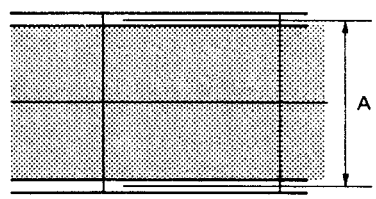
[Connection]



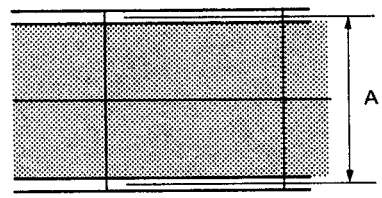
3-1. Y-RF Level Adjustment (OXIDE)

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1A alignment tape to a VTR, and play back a pulse & bar signal.	TP100/PR-103 (A-4)  A=0.5±0.02 Vp-p TRIG: TP108/PR-103 (B-3)	◐ RV601/PA-72A (A-4/PR-103)

3-2. Y-RF Level Adjustment (METAL)

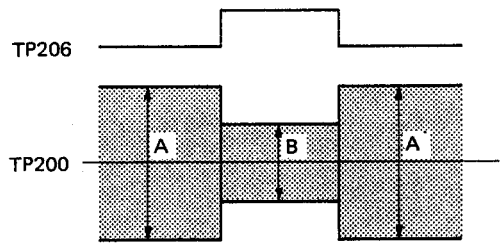
machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1B alignment tape to a VTR, and play back a pulse & bar signal.	TP100/PR-103 (A-4)  A=0.5±0.02 Vp-p TRIG: TP108/PR-103 (B-3)	◐ RV602/PA-72A (A-4/PR-103)

3-3. Y-AGC Level Adjustment

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1B alignment tape to a VTR, and play back a pulse & bar signal.	TP101/PR-103 (A-5)  A=0.5±0.02 Vp-p TRIG: TP108/PR-103 (B-3)	⊘ RV106/PR-103 (B-5)

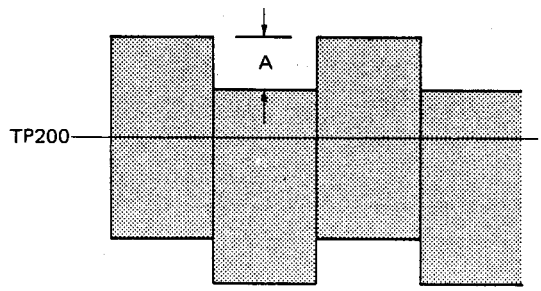
3-4. C-RF Balance/Level Adjustment

This adjustment is only performed for combining with a BVV-5.

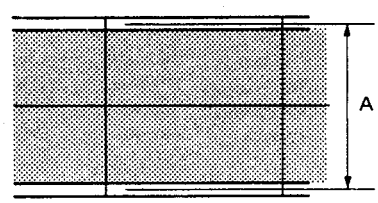
machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1B alignment tape to the BVV-5, and play back a pulse & bar signal.	TP200/PR-103 (D-3) TP206/PR-103 (C-3)] CHOP mode  A=B=0.5±0.02 Vp-p TRIG: TP206/PR-103 (C-3)	⊘ RV601/PA-72 (D-2) (B level) ⊘ RV602/PA-72 (D-2) (A level)

3-5. C-RF Offset Adjustment

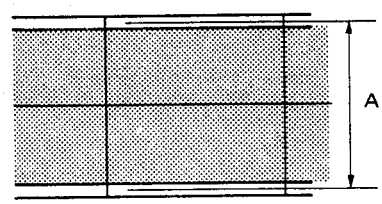
This adjustment is only performed for combining with a BVV-5.

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1B alignment tape to the BVV-5, and play back a color-bar signal.	TP200/PR-103 (D-3) ┐ TP206/PR-103 (C-3) ┘ CHOP mode  A=0 TRIG: TP206/PR-103 (C-3)	⊘ RV200/PR-103 (D-2)

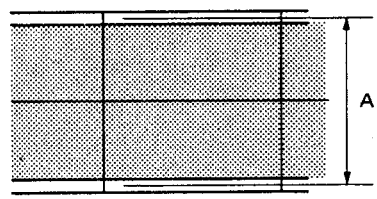
3-6. C-AGC Level Adjustment

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1B alignment tape to a VTR, and play back a pulse & bar signal.	TP201/PR-103 (F-3)  A=0.5±0.02 Vp-p TRIG: TP206/PR-103 (C-3)	⊘ RV204/PR-103 (F-2)

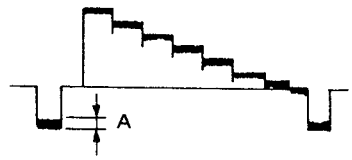
3-7. Y-COS EQ Level Adjustment

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1B alignment tape to a VTR, and play back a pulse & bar signal.	TP102/PR-103 (D-7)  A=0.25±0.01 Vp-p TRIG: TP206/PR-103 (C-3)	◐RV607/EQ-21 (A-6/PR-103)

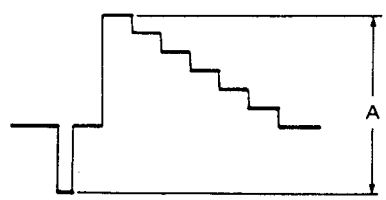
3-8. C-COS EQ Level Adjustment

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1B alignment tape to a VTR, and play back a pulse & bar signal.	TP202/PR-103 (E-4)  A=0.3±0.01 Vp-p TRIG: TP206/PR-103 (C-3)	◐RV607/EQ-21A (E-3/PR-103)

3-9. Y-Carrier Balance Adjustment

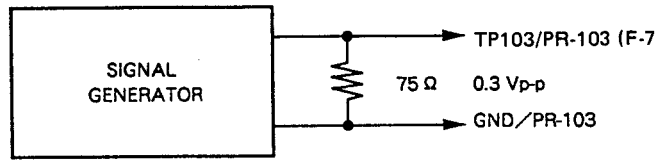
machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1A alignment tape to a VTR, and play back a color-bar signal.	TP105/PR-103 (I-7)  Minimize a carrier-leak at the SYNC tip. (A≦60 mVp-p) TRIG: TP108/PR-103 (B-3)	⊘RV608/DM-64 (E-7/PR-103) ⊘RV102/PR-103 (C-7) Adjust alternately

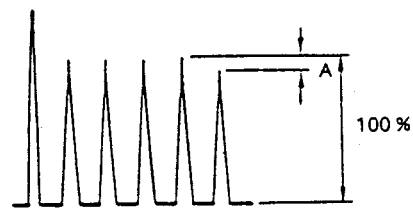
3-10. Y-Demodulator Output Level Adjustment

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1B alignment tape to a VTR, and play back a color-bar signal.	TP105/PR-103 (I-7)  A=1.0±0.04 Vp-p	⊘RV609/VA-69 (H-6/PR-103)

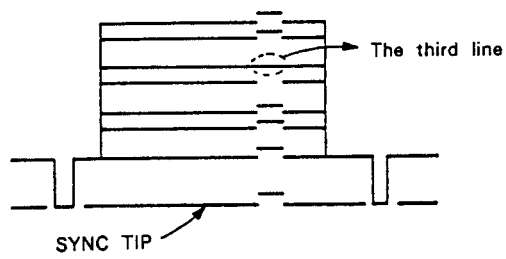
3-11. Y-DO CCD BIAS Adjustment

[Connection]

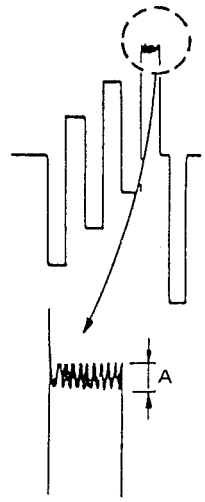


machine conditions for adjustment	spec.	adjustment
• Remove the solder bridge from SL100/PR-103 (F-7) • Supply 5-step signal to TP103/PR-103 (F-7). • Waveform Monitor ; DIFF'D STEP mode. • Insert the blank tape to a VTR, and put into the PLAY mode. • After adjustment is completed, solder SL100 to the former position.	TP104/PR-103 (H-7)  A ≤ 4 % (Flat or amplitude is decreased to the right)	⊘RV610/DL-19 (I-6/PR-103)

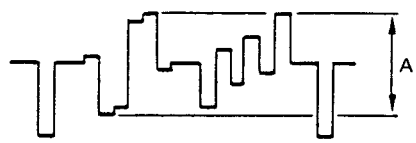
3-12. Y-DO Compensate Level Adjustment

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1B alignment tape to a VTR, and play back a color-bar (DO) signal.	TP309/PR-103 (I-1)  • Adjust the third line from the top of the drop out portion to the third line from the top (RV104). • Adjust the SYNC tip level of the drop out portion to the SYNC tip level (RV103).	⊘RV104/PR-103 (H-6) ⊘RV103/PR-103 (H-7) Adjust alternately

3-13. C-Carrier Balance Adjustment

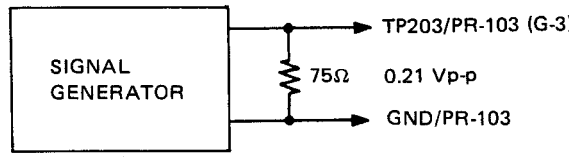
machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1A alignment tape to a VTR, and play back a color-bar signal.	TP205/PR-103 (H-1)  A: Minimize (A≦60 mVp-p)	⊘ RV201/PR-103 (D-4) ⊘ RV608/DM-64 (G-4/PR-103) Adjust alternately

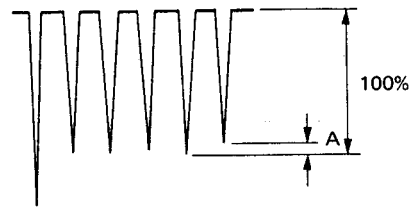
3-14. C-Demodulator Output Level Adjustment

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1B alignment tape to a VTR, and play back a color-bar signal.	TP205/PR-103 (H-1)  A=0.7±0.02 Vp-p	⊘ RV609/VA-69 (H-2/PR-103)

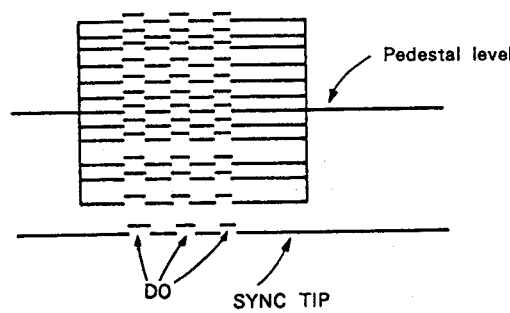
3-15. C-DO CCD BIAS Adjustment

[Connection]

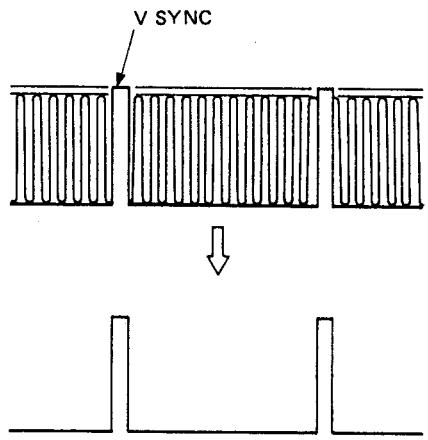


machine conditions for adjustment	spec.	adjustment
• Remove the solder bridge from SL200/PR-103 (G-3). • Supply 5-step signal to TP203/PR-103 (G-3) • Waveform monitor ; DIFF'D STEP mode. • Insert the blank tape to a VTR, and put into the PLAY mode. • After adjustment is completed, solder SL200 to the former position.	TP204/PR-103 (F-1)  A≦4% (Flat or amplitude is increased to the right)	⊘RV610/DL-19 (G-1/PR-103)

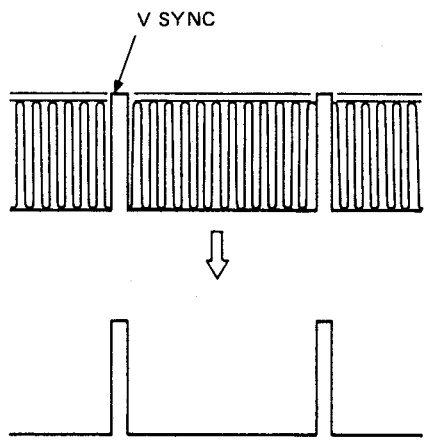
3-16. C-DO Compensate Level Adjustment

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1B alignment tape to a VTR, and play back a color-bar (DO) signal.	TP205/PR-103 (H-1)  • Adjust the seventh line from the top of the drop out portion to the pedestal level (RV203). • Adjust the SYNC tip level of the drop out portion to the SYNC tip level (RV202).	⊘RV203/PR-103 (F-2) ⊘RV202/PR-103 (G-2) Adjust alternately

3-17. Y-DO Sensitivity Adjustment

machine conditions for adjustment	spec.	adjustment
• Solder the 180Ω resistor (1-215-403-00) in parallel with R164/PR-103 (A-6). • Insert the CR5-1B alignment tape to a VTR, and play back flat field. • After adjustment is completed, unsolder the 180Ω resistor.	TP107/PR-103 (C-6) 	⊘ RV108/PR-103 (B-7)

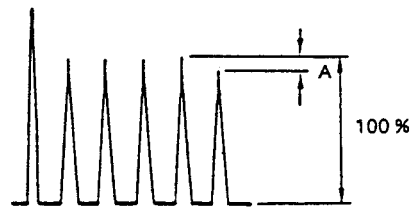
3-18. C-DO Sensitivity Adjustment

machine conditions for adjustment	spec.	adjustment
• Solder the 180Ω resistor (1-215-403-00) in parallel with R279/PR-103 (E-2). • Insert the CR5-1B alignment tape to a VTR, and play back flat field. • After adjustment is completed, unsolder 180Ω resistor.	TP207/PR-103 (F-2) 	⊘ RV206/PR-103 (F-2)

After performing Section 3-18. C-DO Sensitive Adjustment, perform the following adjustments in order of 1 to 4 for combining with a BVW-200

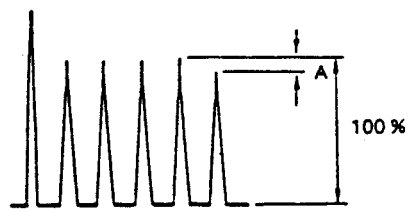
3-19. Y-CCD 1 BIAS Adjustment

This adjustment is only performed for combining with a BVW-200.

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1B alignment tape to the BVW-200, and play back Line 17 signal.	TP307/PR-103 (I-5)  A≦1.5% (Flat or amplitude is decreased to the right.)	⊘ RV308/PR-103 (I-6)

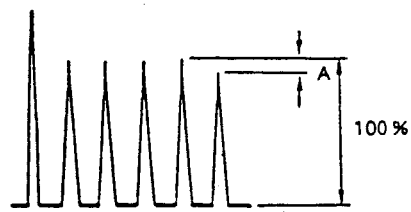
3-20. Y-CCD 2 BIAS Adjustment

This adjustment is only performed for combining with a BVW-200.

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1B alignment tape to the BVW-200, and play back Line 17 signal.	TP308/PR-103 (I-4)  A≦2.5% (Flat or amplitude is decreased to the right.)	⊘ RV309/PR-103 (I-5)

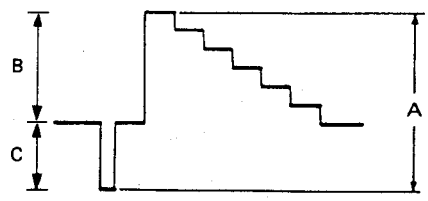
3-21. Y-CCD 3 BIAS Adjustment

This adjustment is only performed for combining with a BVW-200.

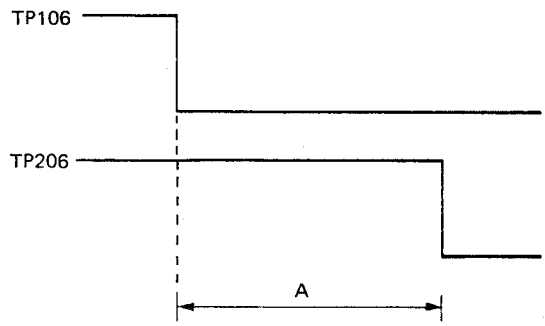
machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1B alignment tape to the BVW-200, and play back Line 17 signal.	TP309/PR-103 (I-1)  A≦3.5% (Flat or amplitude is decreased to the right.)	⊘ RV310/PR-103 (I-4)

3-22. Y-CCD 3 Output Adjustment

This adjustment is only performed for combining with a BVW-200.

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1B alignment tape to the BVW-200, and play back a color-bar signal.	TP309/PR-103 (I-1)  A=1.00±0.01 Vp-p B=0.72±0.01 Vp-p C=0.28±0.01 Vp-p If the specification is not met, perform the following adjustments. 3-19. Y-CCD 1 BIAS Adjustment 3-20. Y-CCD 2 BIAS Adjustment 3-21. Y-CCD 3 BIAS Adjustment	⊘ RV300/PR-103 (H-2)

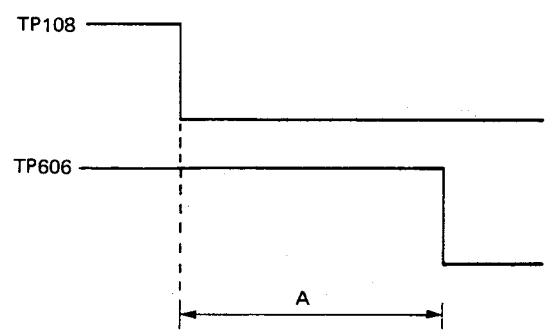
3-23. C Switching Pulse Delay Adjustment

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1B alignment tape to a VTR, and play back a color-bar signal.	TP106/PR-103 (E-4) TP206/PR-103 (C-3)  A=210±10 μsec TRIG: TP106/PR-103 (B-2)	⊘RV105/TG-37 (B-2/PR-103)

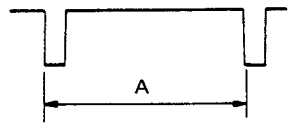
After performing Section 3-19. C Switching Pulse Delay Adjustment, perform the following adjustment for combining with a BVW-200.

3-24. Y Switching Pulse Delay Adjustment

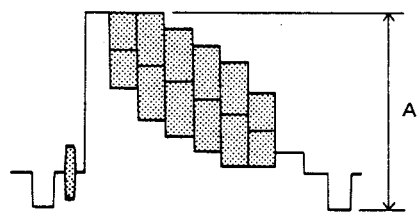
This adjustment is only performed for combining with a BVW-200.

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1B alignment tape to the BVW-200, and play back a color-bar signal.	TP108/PR-103 (B-3) TP606/PR-103 (D-5)  A=164±4 μsec TRIG: TP108/PR-103 (B-3)	⊘RV602/TG-37 (B-2/PR-103)

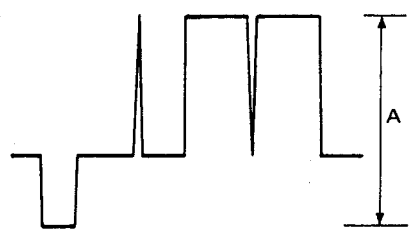
3-25. PSEUDO H SYNC Frequency Adjustment

machine conditions for adjustment	spec.	adjustment
• Put a VTR into STOP mode.	TP605/PR-103 (D-5)  A=68±1μsec	⊘ RV601/PR-103 (E-5)

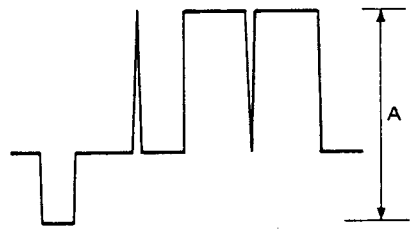
3-26. VIDEO OUT Level Adjustment

machine conditions for adjustment	spec.	adjustment
• MODE: STOP • Connect the NTSC signal generator (TEKTRONIX 1410 or equivalent) to the ENCODE VIDEO OUT connector/a VTR, and supply a color-bar signal.	VIDEO OUT connector/VA-500  A=1.0±0.05 Vp-p	⊘ RV411/PR-104 (D-2)

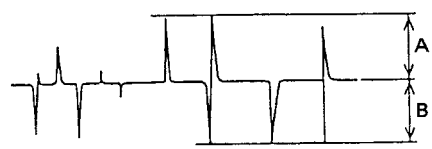
3-27. Y-Nonlinear De-emphasis Adjustment (1)

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1A alignment tape to a VTR, and play back a pulse & bar signal.	TP305/PR-104 (I-4)  A=1.0±0.05 Vp-p	⊘ RV1/NR-27 (I-4/PR-104)

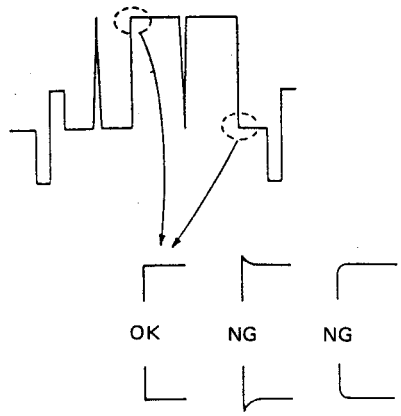
3-28. Y-Level Adjustment

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1B alignment tape to a VTR, and play back a pulse & bar signal.	TP305/PR-104 (I-4)  A=1.0±0.05 Vp-p	⊘ RV307/PR-104 (G-3)

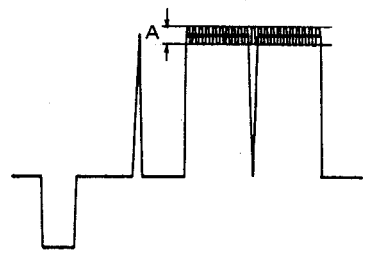
3-29. Y-Nonlinear De-emphasis Adjustment (2)

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1B alignment tape to a VTR, and play back a pulse & bar signal.	TP304/PR-104 (I-4)  A=B	⊘ RV3/NR-27 (I-4/PR-104)

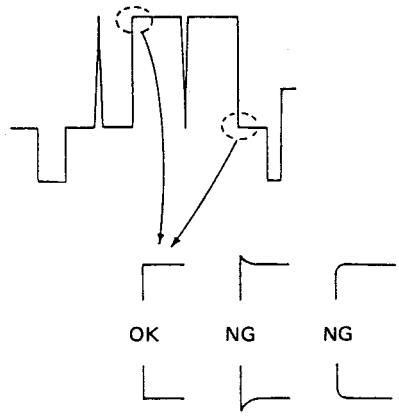
3-30. Y-Nonlinear De-emphasis Adjustment (3)

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1B alignment tape to a VTR, and play back a pulse & bar signal.	TP305/PR-104 (I-4)  	⊘ RV2/NR-27 (I-4/PR-104) ⊘ RV4/NR-27 (I-4/PR-104)

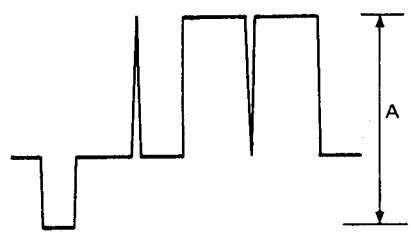
3-31. Y-Noise Canceller Adjustment (1)

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1A alignment tape to a VTR, and play back a pulse & bar signal. • Turn RV7/NR-27 (I-4/PR-104) fully clockwise.	TP303/PR-104 (G-4)  A: Minimize	⊘ RV6/NR-27 (I-4/PR-104) ⊘ RV7/NR-27 (I-4/PR-104)

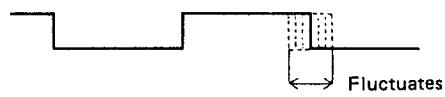
3-32. Y-Noise Canceller Adjustment (2)

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1B alignment tape to a VTR, and play back a pulse & bar signal.	TP303/PR-104 (G-4)  	⊘ RV7/NR-27 (I-4/PR-104)

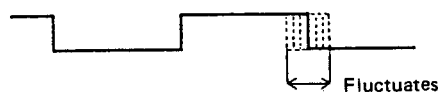
3-33. Y-Noise Canceller Output Adjustment

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1A alignment tape to a VTR, and play back a pulse & bar signal.	TP303/PR-104 (G-4) TP300/PR-104 (I-1)  A=1.0±0.05 Vp-p TRIG: INT	⊘ RV5/NR-27 (I-4/PR-104)

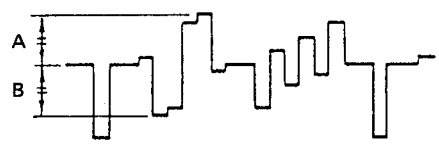
3-34. C-AFC 1/8 Clock Adjustment

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1B alignment tape to a VTR, and play back a color-bar signal.	TP503/PR-104 (D-8)  Minimize the fluctuates of the signal. A=0±20 nsec	◐RV501/PR-104 (C-6)

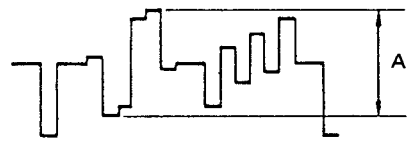
3-35. Y-AFC 1/8 Clock Adjustment

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1B alignment tape to a VTR, and play back a color-bar signal.	TP502/PR-104 (D-8)  Minimize the fluctuates of the signal. A=0±20 nsec	◐RV502/PR-104 (C-7)

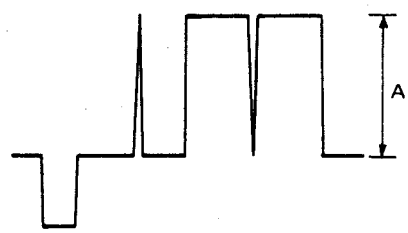
3-36. PRE-ϕ CCD BIAS Adjustment

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1B alignment tape to a VTR, and play back a color-bar signal.	TP100/PR-104 (E-5)  $\frac{A}{B}$=100±2%	◐RV1/DL-18A (D-3/PR-104)

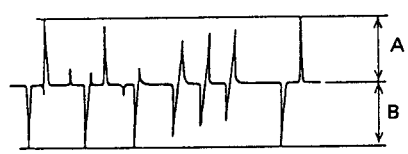
3-37. PRE-ϕ CCD Output Adjustment

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1B alignment tape to a VTR, and play back a color-bar signal.	TP100/PR-104 (E-5)  A=0.7±0.02 Vp-p	⊘RV100/PR-104 (F-6)

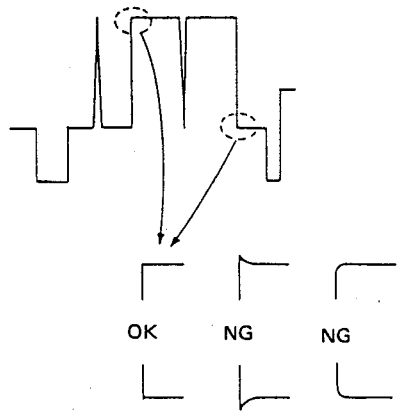
3-38. C-Nonlinear De-emphasis Adjustment (1)

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1A alignment tape to a VTR, and play back a pulse & bar signal.	TP103/PR-104 (E-3)  A=0.7±0.02 Vp-p	⊘RV1/NR-27 (E-3/PR-104)

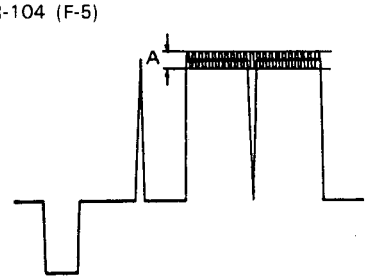
3-39. C-Nonlinear De-emphasis Adjustment (2)

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1A alignment tape to a VTR, and play back a color-bar signal.	TP101/PR-104 (F-3)  A=B	⊘RV3//NR-27 (E-3/PR-104)

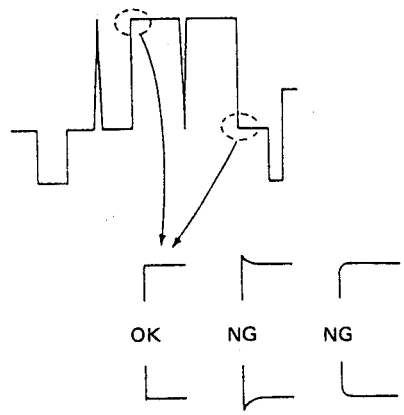
3-40. C-Nonlinear De-emphasis Adjustment (3)

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1A alignment tape to a VTR, and play back a pulse & bar signal.	TP103/PR-104 (E-3)  	⊘RV2/NR-27 (E-3/PR-104) ⊘RV4/NR-27 (E-3/PR-104) Adjust alternately

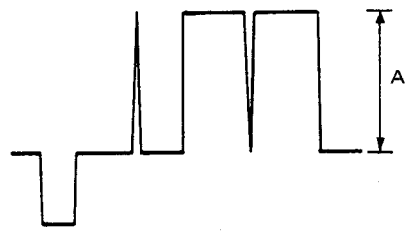
3-41. C-Noise Canceller Adjustment (1)

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1A alignment tape to a VTR, and play back a pulse & bar signal. • Turn RV7/NR-27 (E-3/PR-104) fully clockwise.	TP102/PR-104 (F-5)  A: Minimize	⊘RV6/NR-27 (E-3/PR-104) ⊘RV7/NR-27 (E-3/PR-104)

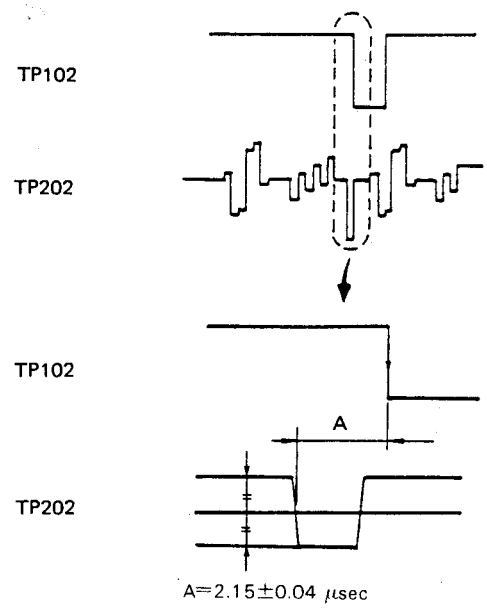
3-42. C-Noise Canceller Adjustment (2)

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1A alignment tape to a VTR, and play back a pulse & bar signal.	TP102/PR-104 (F-5)  	⊘RV7/NR-27 (E-4/PR-104)

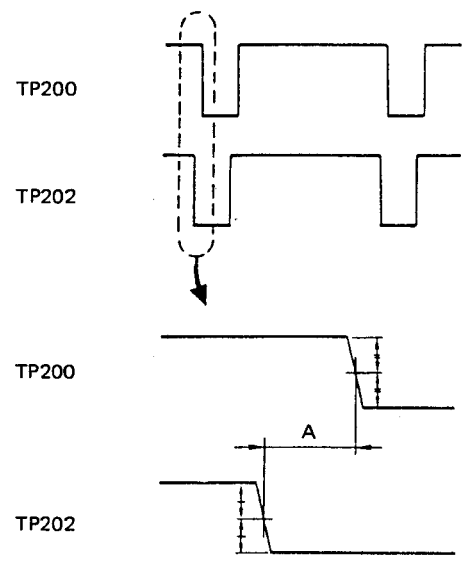
3-43. C-Noise Canceller Output Adjustment

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1A alignment tape to a VTR, and play back a pulse & bar signal.	TP102/PR-104 (F-5)  A=0.7±0.02 Vp-p	⊘RV5/NR-27 (E-4/PR-104)

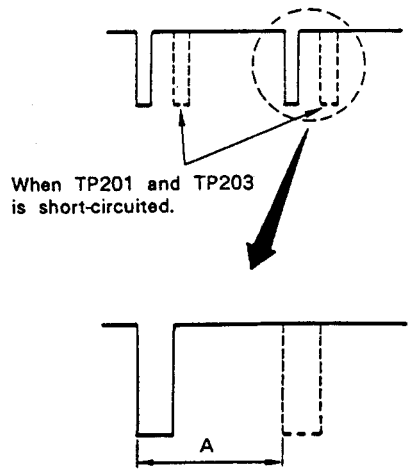
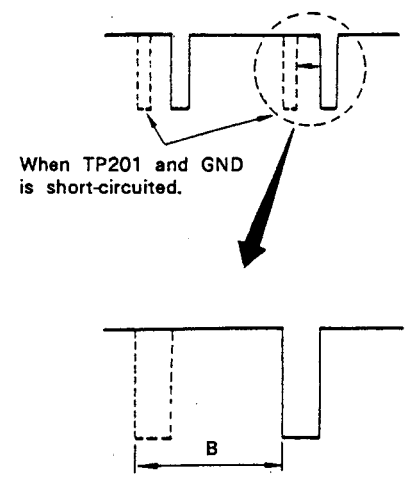
3-44. PRE-ϕ C-SH Adjustment

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1B alignment tape to a VTR, and play back a color-bar signal.	TP102/PR-104 (F-5) TP202/PR-104 (A-6)  A=2.15±0.04 μsec	⊘RV108/PR-104 (C-4)

3-45. PRE-ϕ Y-SH Adjustment

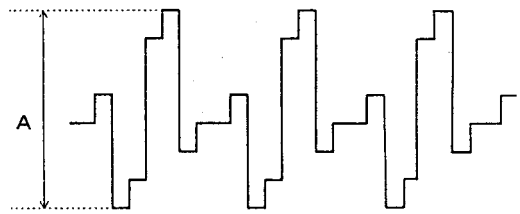
machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1B alignment tape to a VTR, and play back a color-bar signal.	TP202/PR-104 (A-6) TP200/PR-104 (D-8)  A=0.85±0.05 μsec	⊘RV200/PR-104 (B-6)

3-46. PRE-ϕ Limiter Adjustment

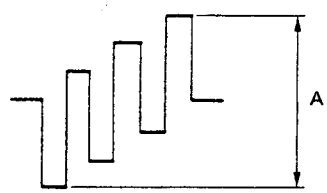
machine conditions for adjustment	spec.	adjustment
Step 1. • Insert the CR5-1B alignment tape to a VTR, and play back a color-bar signal. • Using a short clip, short between TP201/PR-104 (A-6) and TP203/PR-104 (A-6). • After adjustment is completed, remove the short clip.	TP200/PR-104 (D-8) TP202/PR-104 (A-6)  A=16±1 μsec	⊘RV202/PR-104 (A-4)
Step 2. • Using a short clip, short between TP201/PR-104 (A-6) and GND/PR-103. • After adjustment is completed, remove the short clip.	 B=16±1 μsec	⊘RV201/PR-104 (A-4)

3-47. R-Y Level Adjustment

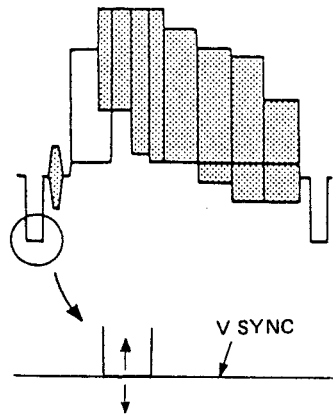
Before performing this adjustment, perform Section 3-60. EXP-CCD BIAS Adjustment (1) and Section 3-61. EXP-CCD BIAS Adjustment (2).

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1B alignment tape to a VTR, and play back a color-bar signal.	TP600/PR-104 (G-6)  When RV600 is adjusted, the waveform level changes one by one. A=0.7±0.02 Vp-p	⊘RV600/PR-104 (E-7) ⊘RV602/PR-104 (F-7) Adjust alternately

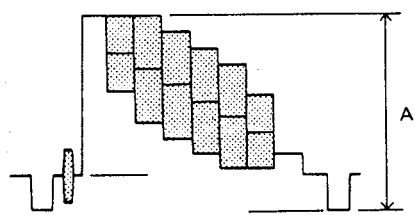
3-48. B-Y Level Adjustment

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1B alignment tape to a VTR, and play back a color-bar signal.	TP601/PR-104 (G-7)  When RV601 is adjusted, the waveform level changes one by one. A=0.7±0.02 Vp-p	⊘RV601/PR-104 (E-8) ⊘RV605/PR-104 (G-8)

3-49. Y SYNC Replacement Adjustment

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1B alignment tape to a VTR, and play back a color-bar signal.	TP412/PR-104 (D-1)  Adjust the SYNC tip level of H-SYNC to the V-SYNC. 0±1.5 IRE	⊘RV308/PR-104 (F-3)

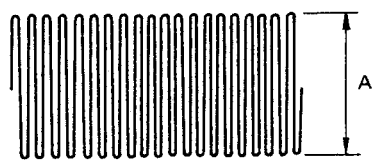
3-50. Y Output Adjustment

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1B alignment tape to a VTR, and play back a color-bar signal.	VIDEO OUT connector/VA-500 (Terminated by 75Ω)  A=1.0±0.02 Vp-p	⊘RV309/PR-104 (E-2)

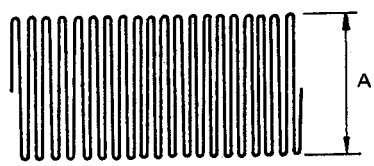
3-51. 3.58 MHz OSC Adjustment

machine conditions for adjustment	spec.	adjustment
• Connect the oscilloscope to TP406/PR-104 (I-7) and connect the frequency counter to the out connector. • Insert the CR5-1B alignment tape to a VTR, and play back a color-bar signal.	TP406/PR-104 (I-7) f=3,579,545 ± 5Hz	⊘CV400/PR-104 (I-7)

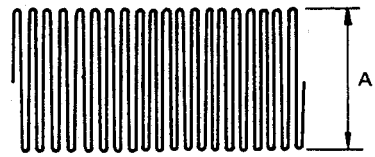
3-52. SC-Tuning Adjustment

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1B alignment tape to a VTR, and play back a color-bar signal.	TP407/PR-104 (I-7)  A: Maximize	⊘LV400/PR-104 (H-7)

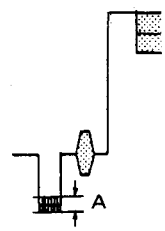
3-53. U-Level Adjustment

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1B alignment tape to a VTR, and play back a color-bar signal.	TP408/PR-104 (H-4)  A=0.6±0.1 Vp-p	⊘RV407/PR-104 (H-7)

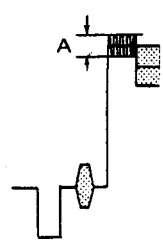
3-54. V-Level Adjustment

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1B alignment tape to a VTR, and play back a color-bar signal.	TP409/PR-104 (H-4)  A=0.6±0.1 Vp-p	⊘RV409/PR-104 (I-7)

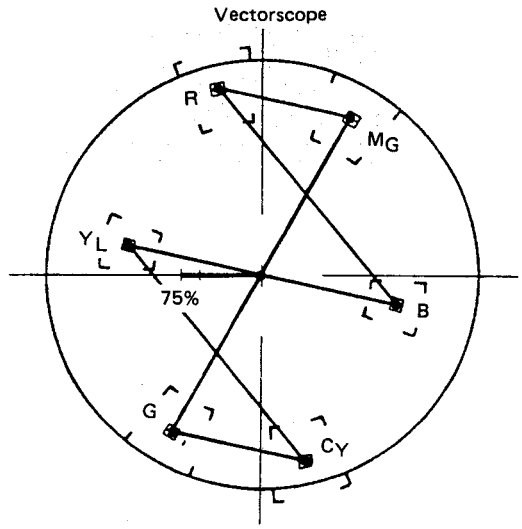
3-55. C-Blanking Adjustment

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1B alignment tape to a VTR, and play back a color-bar signal.	TP412/PR-104 (D-1)  A: Minimize (A≦20 mV)	⊘RV402/PR-104 (F-4) ⊘RV404/PR-104 (F-4) Adjust alternately

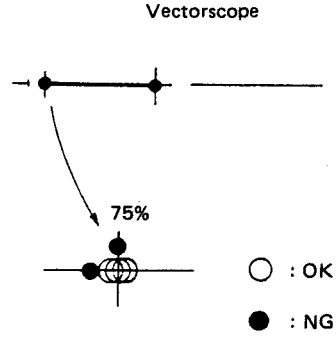
3-56. C-Carrier Balance Adjustment

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1B alignment tape to a VTR, and play back a color-bar signal.	TP412/PR-104 (D-1)  A: Minimize (A≦40 mV)	⊘RV401/PR-104 (G-6) ⊘RV403/PR-104 (F-6) Adjust alternately

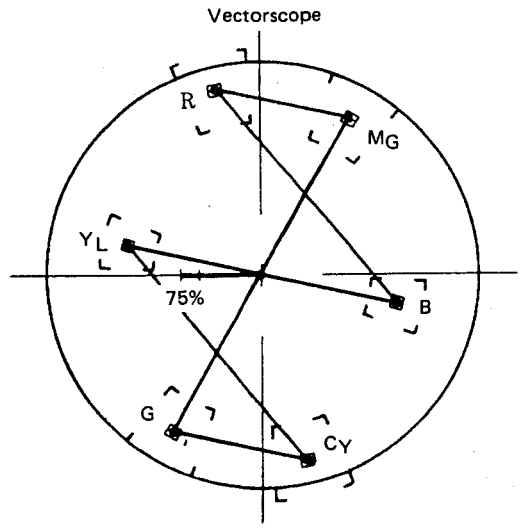
3-57. C-Balance Adjustment

machine conditions for adjustment	spec.	adjustment
• Supply a SC signal to the SC IN connector/VA-500 and the EXT SC IN connector/vectorscope. • Adjust the level so that "R" and "Cy" are nearly placed inside the " ⊞ " frame.	VIDEO OUT connector/VA-500  All locus should be placed inside the " ⊞ " frame.	⊘RV400/PR-104 (G-6) ⊘RV408/PR-104 (I-6) Adjust alternately

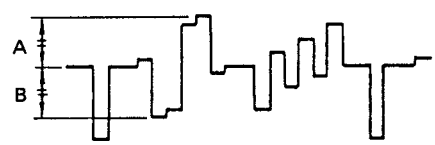
3-58. Burst Level Adjustment

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1B alignment tape to a VTR, and play back a color-bar signal. • Set the GAIN on the vectorscope to CAL.	VIDEO OUT connector/VA-500 	⊘RV406/PR-104 (F-1)

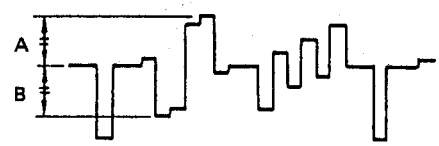
3-59. Chroma Level Adjustment

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1B alignment tape to a VTR, and play back a color-bar signal.	VIDEO OUT connector/VA-500  All locus should be placed inside the " ⊞ " frame.	◐RV410/PR-104 (G-4)

3-60. EXP-CCD BIAS Adjustment (1)

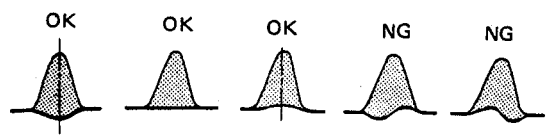
machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1B alignment tape to a VTR, and play back a color-bar signal.	TP600/PR-104 (G-6)  $\frac{A}{B}=100\pm2\%$	◐RV1/DL-18 (E-7/PR-104) ◐RV1/DL-18 (E-7/PR-104)

3-61. EXP-CCD BIAS Adjustment (2)

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1B alignment tape to a VTR, and play back a color-bar signal.	TP601/PR-104 (G-7)  $\frac{A}{B}$ =100±2%	⊘RV1/DL-18 (E-8/PR-104) ⊘RV1/DL-18 (E-6/PR-104)

3-62. Y/C Delay Adjustment

The play back function of this unit is guaranteed by the standard VTR. However it is possible to appear the Y/C delay by combining with a VTR (BVV-5 or BVW-200). When the Y/C delay is appeared, adjust as follows.

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1B alignment tape to a VTR, and play back a pulse & bar signal.	VIDEO OUT 1 or 2 connector/VA-500  0±20 nsec	⊘RV600/PR-103 (E-5)

Note) • Free Run Adjustment
Set ⊘RV500/PR-104 (B-4) to the mechanical center position.

第4章
オーディオ系電気調整要項

〔使用機器〕
- VTR：BVV-5又はBVW-200（規格値通りに調整されていること）
- 周波数カウンター
- オーディオ発振器
- オシロスコープ
- 外部電源（2A，12V）
- AC電圧計
- アライメントテープ CR5-1AおよびCR5-1B

CR5-1Aの内容

TIME min, sec	VIDEO TRACK	AUDIO TRACK
0 : 00	Color Bars	Blank
4 : 55	Blank	
5 : 00	Gated Sweep	1kHz／0VU*1 ch1, ch2 (　,　) dB
8 : 55	Blank	
9 : 00	Y／C Delay ch A, ch B (+0, −10) nsec	10kHz／−10VU
10 : 55	Blank	
11 : 00	2T Pulse & Bar	1k-15kHz／−20VU ch1, ch2 *2 1k (reference) dB
12 : 55	Blank	
13 : 00	C-Linearity	40 (　,　) 7k (　,　) 10k (　,　) 15k (　,　)
14 : 55	Blank	
15 : 00	C-Monoscope (Switching position is shifted.	Blank
16 : 55	Blank	Blank
18 : 55		

CR5-1Bの内容

TIME min, sec	VIDEO TRACK	AFM
0 : 00	V.Locked Sweep	無変調
2 : 00	Gated Sweep (CTDM)	
5 : 00	Pulse & Bar (CTDM)	
8 : 00	Gated Sweep	
11 : 00	Pulse & Bar	
14 : 00	Color Bars	400Hz 正弦波 25k DEVIATION
16 : 30		75k DEVIATION
17 : 00	Bowtie Signal	無変調
19 : 00	Line 17 Signal	
22 : 00	C Linearity	
24 : 00	Flat Field	
26 : 00	Color Bar with Dropout	
28 : 00	Color Multi Pulse with VISC	
30 : 00		

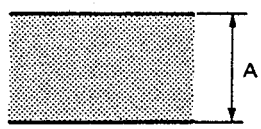
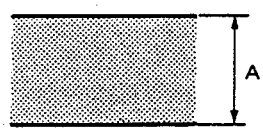
4-1. VCO発振周波数調整 540kHz

調整時の状態	規格	調整箇所
●TP409／AU-99（H-5）とTP310／AU-99（I-5）をショートクップでショートする。 ●調整後ショートクリップを外す。	TP408／AU-99（G-5） 540±1kHz	⊘RV403／AU-99（G-4）

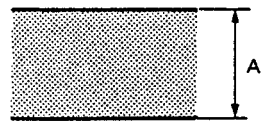
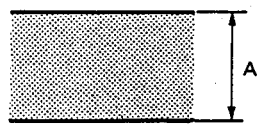
4-2. VCO発振周波数調整 310kHz

調整時の状態	規格	調整箇所
●TP309／AU-99（I-5）とTP310／AU-99（I-5）をショートクップでショートする。 ●調整後ショートクリップを外す。	TP308／AU-99（I-5） 310±1kHz	⊘RV303／AU-99（H-4）

4-3. AFM RF AMP GAIN調整

調整時の状態	規格	調整箇所
Step1. ●VTRにアライメントテープCR 5-1Bを挿入し，無変調信号部を再生する。	TP302／AU-99（I-3）  A＝0.33±0.01Vp-p	⊘RV308／AU-99（G-3）
Step2. ●VTRにアライメントテープCR 5-1Bを挿入し，無変調信号部を再生する。	TP303／AU-99（H-4）  A＝1.5±0.1Vp-p	⊘RV301／AU-99（H-3）

4-4. DO MUTE COMPARATOR調整

調整時の状態	規格	調整箇所
Step1. ●VTRにアライメントテープCR 5-1Bを挿入し，無変調信号部を再生する。	TP303／AU-99（H-4）  A＝0.13±0.1Vp-p	⊘RV301／AU-99（H-3）
Step2. ●VTRにアライメントテープCR 5-1Bを挿入し，無変調信号部を再生する。	TP502／AU-99（E-4） Lレベル（3.6V以下）からHレベル（8.4V以上）になる様に調整する。	⊘RV500／AU-99（D-4）
Step3.	TP303／AU-99（H-4）  A＝1.5±0.1Vp-p	⊘RV301／AU-99（H-3）

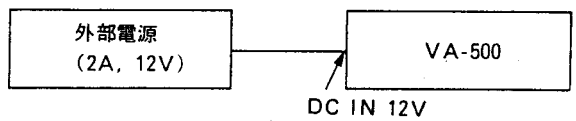
4-5. AFMレベル調整 3CH

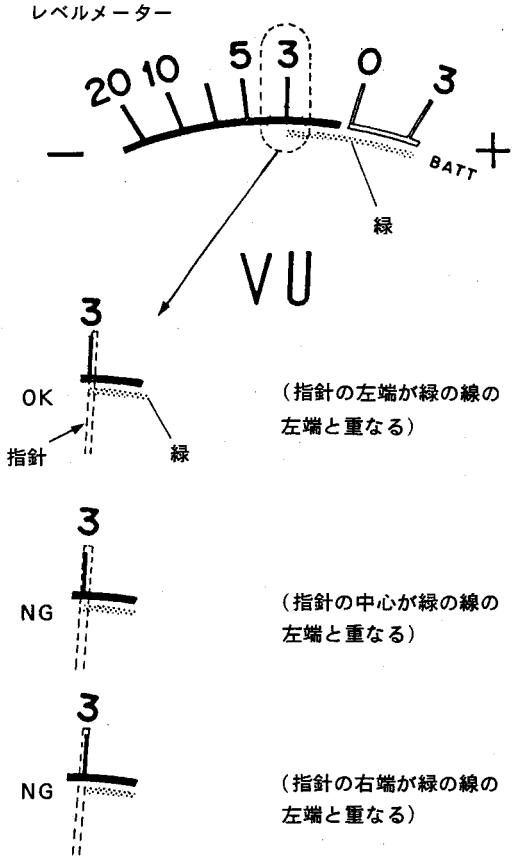
調整時の状態	規格	調整箇所
●AUDIO PB LEVELスイッチ CH-1, 2, 4：OFF CH-3　　：ON ●AUDIO PB LEVELつまみ CH-3　　：センター付近 ●VTRにアライメントテープCR 5-1Bを挿入し，400Hz正弦波25Kデビエーション部を再生する。	AUDIO OUTコネクター／VA-500（600Ωで終端） ＋4 ±1dBm	⊘RV305／AU-99（I-6）

4-6. AFMレベル調整 4CH

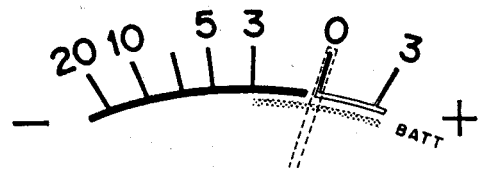
調整時の状態	規格	調整箇所
●AUDIO PB LEVELスイッチ CH-1, 2, 3 : OFF CH-4 : ON ●AUDIO PB LEVELつまみ CH-4 : センター付近 ●VTRにアライメントテープCR 5-1Bを挿入し，400Hz正弦波25 Kデビエーション部を再生する。	AUDIO OUTコネクター／VA-500（600Ωで終端） ＋4 ±1dBm	◐RV405／AU-99 (H-5)

4-7. METER DRIVE AMP (BATT) 調整

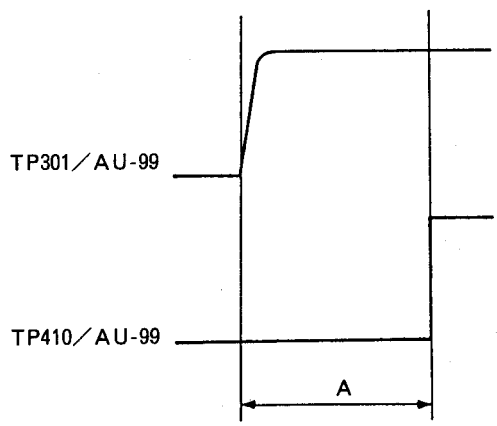


調整時の状態	規格	調整箇所
●外部電源より10.5±0.2Vdcを VA-500に供給する。 ●BATT CHECKボタンを押す。 注）チェック／調整はセットを水平状態で行うこと。	レベルメーター  （指針の左端が緑の線の左端と重なる） （指針の中心が緑の線の左端と重なる） （指針の右端が緑の線の左端と重なる）	◐RV502／AU-99 (C-2)

4-8. METER DRIVE AMP (VU) 調整

調整時の状態	規格	調整箇所
●VTRにアライメントテープCR 5-1Bを挿入し，400Hz正弦波25 Kデビエーション部を再生する。 ●AUDIO PB LEVELスイッチ CH-1, 2, 3 : OFF CH-4 : ON ●AUDIO PB LEVELつまみ CH-4 :センター付近 注）チェック／調整はセットを水平状態で行うこと。	レベルメーター  VU 指針の中心が0VUを指すこと。	⊘RV501／AU-99 (B-2)

4-9. ホールドパルス調整

調整時の状態	規格	調整箇所
●VTRにアライメントテープCR 5-1Bを挿入し，カラーバー信号部を再生する。	TP301／AU-99 (E-2) TP410／AU-99 (H-5)  A = 5 ± 1 μsec	⊘RV505／AU-99 (D-4)

4-10. 1次ホールド調整 4CH

調整時の状態	規格	調整箇所
●VTRにアライメントテープCR 5-1Bを挿入し，400Hz正弦波25 Kデビエーション部を再生する。 ●RV404／AU-99（H-5）を反時計方向一杯に回す。 ●AUDIO PB LEVELスイッチ CH-1, 2, 3 : OFF CH-4 : ON ●AUDIO PB LEVELつまみ CH-4 : MAX	HEADPHONES／VA-500 NOISE : 最小にする。	⊘RV404／AU-99（H-5）

4-11. 1次ホールド調整 3CH

調整時の状態	規格	調整箇所
●VTRにアライメントテープCR 5-1Bを挿入し，400Hz正弦波25 Kデビエーション部を再生する。 ●RV304／AU-99（I-5）を反時計方向一杯に回す。 ●AUDIO PB LEVELスイッチ CH-1, 2, 4 : OFF CH-3 : ON ●AUDIO PB LEVELつまみ CH-3 : MAX	HEADPHONES／VA-500 NOISE : 最小にする。	⊘RV304／AU-99（I-5）

4-12. LNGレベル，周波数特性チェック 1CH

調整時の状態	規格	調整箇所
●VTRにアライメントテープCR 5-1Bを挿入し，40Hz，1kHz，7kHz，10kHz，15kHzの信号を再生する。 ●DOLBY NRスイッチ：OFF ●AUDIO PB LEVELスイッチ CH-1 : ON ●AUDIO PB LEVELつまみ CH-1 : MAX	CH-1 AUDIO OUT／VA-500（600Ω負荷）	

周波数	レベル
40Hz	基準±3dB
1kHz	基準
7kHz	基準±3dB
10kHz	
15kHz	

4-13. LNGレベル，周波数特性チェック 2CH

<table>
<tr><th>調整時の状態</th><th>規格</th><th>調整箇所</th></tr>
<tr>
<td>●VTRにアライメントテープCR 5-1Bを挿入し，40Hz，1kHz，7kHz，10kHz，15kHzの信号を再生する。
●DOLBY NRスイッチ：OFF
●AUDIO PB LEVELスイッチ CH-2：ON
●AUDIO PB LEVELつまみ CH-2：MAX</td>
<td>CH-2 AUDIO OUT／VA-500 (600Ω負荷)
<table><tr><th>周波数</th><th>レベル</th></tr><tr><td>40Hz</td><td>基準±3dB</td></tr><tr><td>1kHz</td><td>基準</td></tr><tr><td>7kHz</td><td rowspan="3">基準±3dB</td></tr><tr><td>10kHz</td></tr><tr><td>15kHz</td></tr></table></td>
<td></td>
</tr>
</table>

SECTION 4
AUDIO SYSTEM ALIGNMENT

[Equipment Required]

- VTR : BVV-5 or BVW-200 (Should be adjusted correctly)
- Frequency Counter
- Audio oscillator
- Oscilloscope
- External Power Supply (2A, 12V)
- AC Voltmeter
- Alignment tapes CR5-1A and CR5-1B

CR5-1A Contents

TIME min, sec	VIDEO TRACK	AUDIO TRACK
0:00	Color Bars	Blank
4:55	Blank	
5:00	Gated Sweep	1kHz/0VU*1 ch1, ch2 (,) dB
8:55	Blank	
9:00	Y/C Delay ch A, ch B (+0, −10) nsec	10kHz/−10VU
10:55	Blank	
11:00	2T Pulse & Bar	1k−15kHz/−20VU ch1, ch2*2 1k (reference) dB
12:55	Blank	
13:00	C-Linearity	40(,) 7k(,) 10k(,) 15k(,)
14:55	Blank	
15:00	C-Monoscope (Switching position is shifted.)	Blank
16:55	Blank	Blank
18:55		

CR5-1B Contents

TIME min, sec	VIDEO TRACK	AFM
0:00	V. Locked Sweep	UNMODULATED CARRIER
2:00	Gated Sweep (CTDM)	
5:00	Pulse & Bar (CTDM)	
8:00	Gated Sweep	
11:00	Pulse & Bar	
14:00	Color Bars	400Hz SINE WAVE 25k DEVIATION
16:30		75k DEVIATION
17:00	Bowtie Signal	UNMODULATED CARRIER
19:00	Line 17 Signal	
22:00	C Linearity	
24:00	Flat Field	
26:00	Color Bar with Dropout	
28:00	Color Multi Pulse with VISC	
30:00		

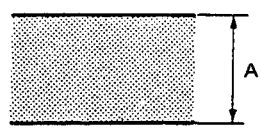
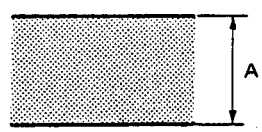
4-1. VCO Oscillating Frequency Adjustment 540 kHz

machine conditions for adjustment	spec.	adjustment
• Using a short clip, short between TP409/AU-99 (H-5) and TP310/ AU-99 (I-5). • After adjustment is completed, remove the short clip.	TP408/AU-99 (G-5) 540±1 kHz	⊘RV403/AU-99 (G-4)

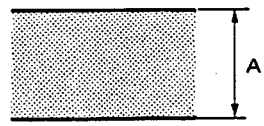
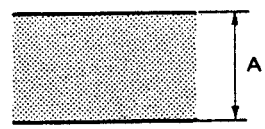
4-2. VCO Oscillating Frequency Adjustment 310 kHz

machine conditions for adjustment	spec.	adjustment
• Using a short clip, short between TP309/AU-99 (I-5) and TP310/ AU-99 (I-5). • After adjustment is completed, remove the short clip.	TP308/AU-99 (I-5) 310±1 kHz	⊘RV303/AU-99 (H-4)

4-3. AFM RF AMP Gain Adjustment

machine conditions for adjustment	spec.	adjustment
Step 1. • Insert the CR5-1B alignment tape to a VTR, and play back an unmodulation signal.	TP302/AU-99 (I-3)  A=0.33±0.01 Vp-p	⊘RV308/AU-99 (G-3)
Step 2. • Insert the CR5-1B alignment tape to a VTR, and play back an unmodulation signal.	TP303/AU-99 (H-4)  A=1.5±0.1 Vp-p	⊘RV301/AU-99 (H-3)

4-4. DO Mute Comparator Adjustment

machine conditions for adjustment	spec.	adjustment
Step 1. • Insert the CR5-1B alignment tape to a VTR, and play back an unmodulation signal.	TP303/AU-99 (H-4)  A=0.13±0.1 Vp-p	⊘RV301/AU-99 (H-3)
Step 2. • Insert the CR5-1B alignment tape to a VTR, and play back an unmodulation signal.	TP502/AU-99 (E-4) Adjust RV500 so that the level of TP502 changes from L level (less than 3.6V) to H level (more than 8.4V)	⊘RV500/AU-99 (D-4)
Step 3.	TP303/AU-99 (H-4)  A=1.5±0.1 Vp-p	⊘RV301/AU-99 (H-3)

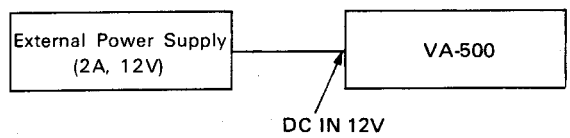
4-5. AFM Level Adjustment 3CH

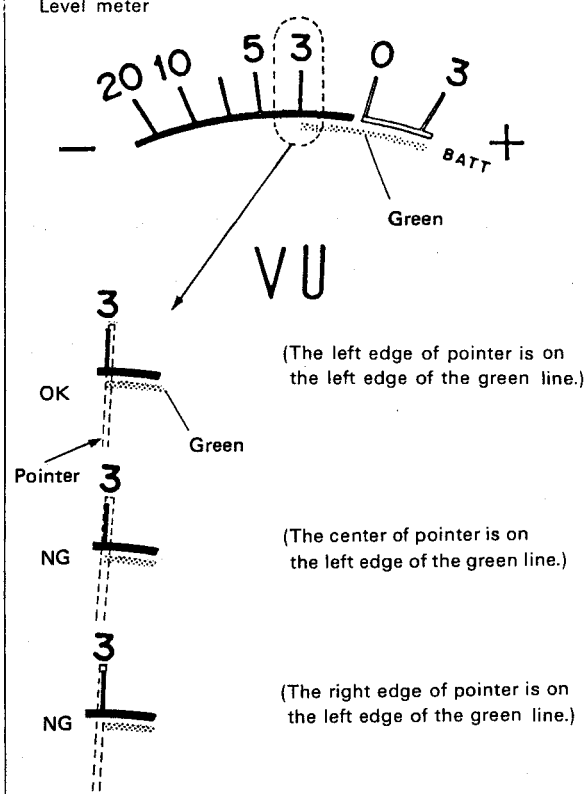
machine conditions for adjustment	spec.	adjustment
• AUDIO PB LEVEL switch CH-1, 2, 4: OFF CH-3 : ON • AUDIO PB LEVEL volume CH-3 Vol.: Around center • Insert the CR5-1B alignment tape to a VTR, and play back a 400 Hz sine-wave 25 kHz deviation signal.	AUDIO OUT connector/VA-500 (Terminated by 600Ω) +4±1 dBm	⊘RV305/AU-99 (I-6)

4-6. AFM Level Adjustment 4CH

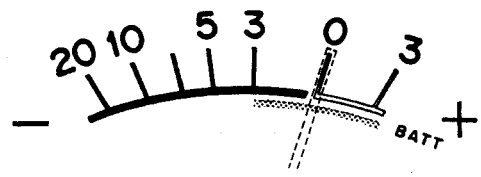
machine conditions for adjustment	spec.	adjustment
• AUDIO PB LEVEL switch CH-1, 2, 3 : OFF CH-4 : ON • AUDIO PB LEVEL volume CH-4: Around center • Insert the CR5-1B alignment tape to a VTR, and play back a 400 Hz sine-wave 25 kHz deviation signal.	AUDIO OUT connector/VA-500 (Terminated by 600Ω) +4±1 dBm	⊘RV405/AU-99 (H-5)

4-7. Meter Drive AMP (BATT) Adjustment

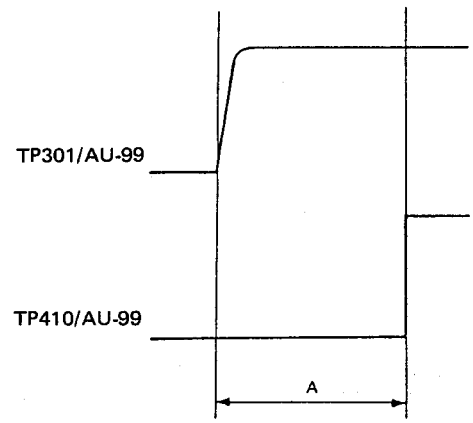


machine conditions for adjustment	spec.	adjustment
• Supply 10.5±0.2 Vdc of an external power to the VA-500. • Press the BATT CHECK button. (Note) Place the unit horizontal to the floor in checking or adjustment.	Level meter 	⊘RV502/AU-99 (C-2)

4-8. Meter Drive AMP (VU) Adjustment

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1B alignment tape to a VTR, and play back a 400 Hz sine-wave 25 kHz deviation signal. • AUDIO PB LEVEL switch CH-1, 2, 3 : OFF CH-4 : ON • AUDIO PB LEVEL volume CH-4: Around center (Note) Place the unit horizontal to the floor in checking or adjustment.	Level meter  VU The center of pointer should be 0VU.	◐RV501/AU-99 (B-2)

4-9. Hold Pulse Adjustment

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1B alignment tape to a VTR, and play back a color-bar signal.	TP301/AU-99 (E-2) TP410/AU-99 (H-5)  A=5±1 μsec	◐RV505/AU-99 (D-4)

4-10. Hold Adjustment 4CH

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1B alignment tape to a VTR, and play back a 400 Hz sine-wave 25 kHz deviation signal. • Turn RV404/AU-99 (H-5) fully counterclockwise. • AUDIO PB LEVEL switch CH-1, 2, 3 : OFF CH-4 : ON • AUDIO PB LEVEL volume CH-4: MAX	HEADPHONES/VA-500 NOISE: Minimize	⊘RV404/AU-99 (H-5)

4-11. Hold Adjustment 3CH

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1B alignment tape to a VTR, and play back a 400 Hz sine-wave 25 kHz deviation signal. • Turn RV304/AU-99 (I-5) fully counterclockwise. • AUDIO PB LEVEL switch CH-1, 2, 4 : OFF CH-3 : ON • AUDIO PB LEVEL volume CH-3: MAX	HEADPHONES/VA-500 NOISE: Minimize	⊘RV304/AU-99 (I-5)

4-12. LNG Frequency Response Check 1CH

machine conditions for adjustment	spec.	adjustment
• Insert the CR5-1A alignment tape to a VTR, and play back 40 Hz, 1 kHz, 7 kHz, 10 kHz and 15 kHz signals. • DOLBY NR switch: OFF • AUDIO PB LEVEL switch CH-1: ON • AUDIO PB LEVEL volume CH-1: MAX	CH-1 AUDIO OUT/VA-500 (at 600 ohm load)	

Freq.	Level
40Hz	Reference ± 3dB
1kHz	Reference
7kHz	Reference ± 3dB
10kHz	
15kHz	

4-13. LNG Frequency Response Check 2CH

<table>
<tr><th>machine conditions
for adjustment</th><th>spec.</th><th>adjustment</th></tr>
<tr><td>• Insert the CR5-1A alignment tape to a VTR, and play back 40 Hz, 1 kHz, 7 kHz, 10 kHz and 15 kHz signals.

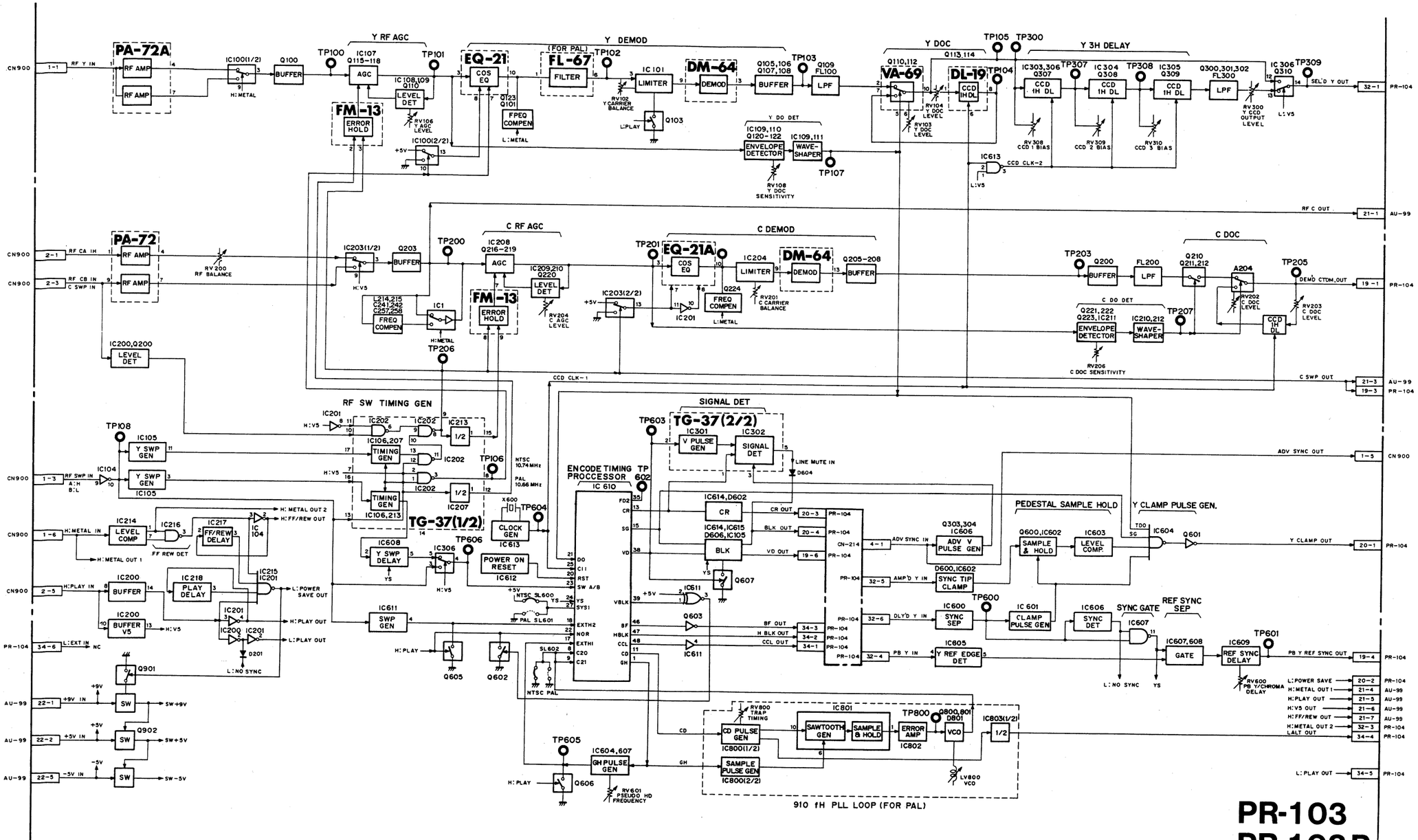
• DOLBY NR switch: OFF

• AUDIO PB LEVEL switch
CH-2: ON

• AUDIO PB LEVEL volume
CH-2: MAX</td><td>CH-2 AUDIO OUT/VA-500 (at 600 ohm load)
<table><tr><th>Freq.</th><th>Level</th></tr><tr><td>40Hz</td><td>Reference ± 3dB</td></tr><tr><td>1kHz</td><td>Reference</td></tr><tr><td>7kHz</td><td rowspan="3">Reference ± 3dB</td></tr><tr><td>10kHz</td></tr><tr><td>15kHz</td></tr></table></td><td></td></tr>
</table>

SECTION 5
BLOCK DIAGRAMS

VIDEO RF DEMODULATOR

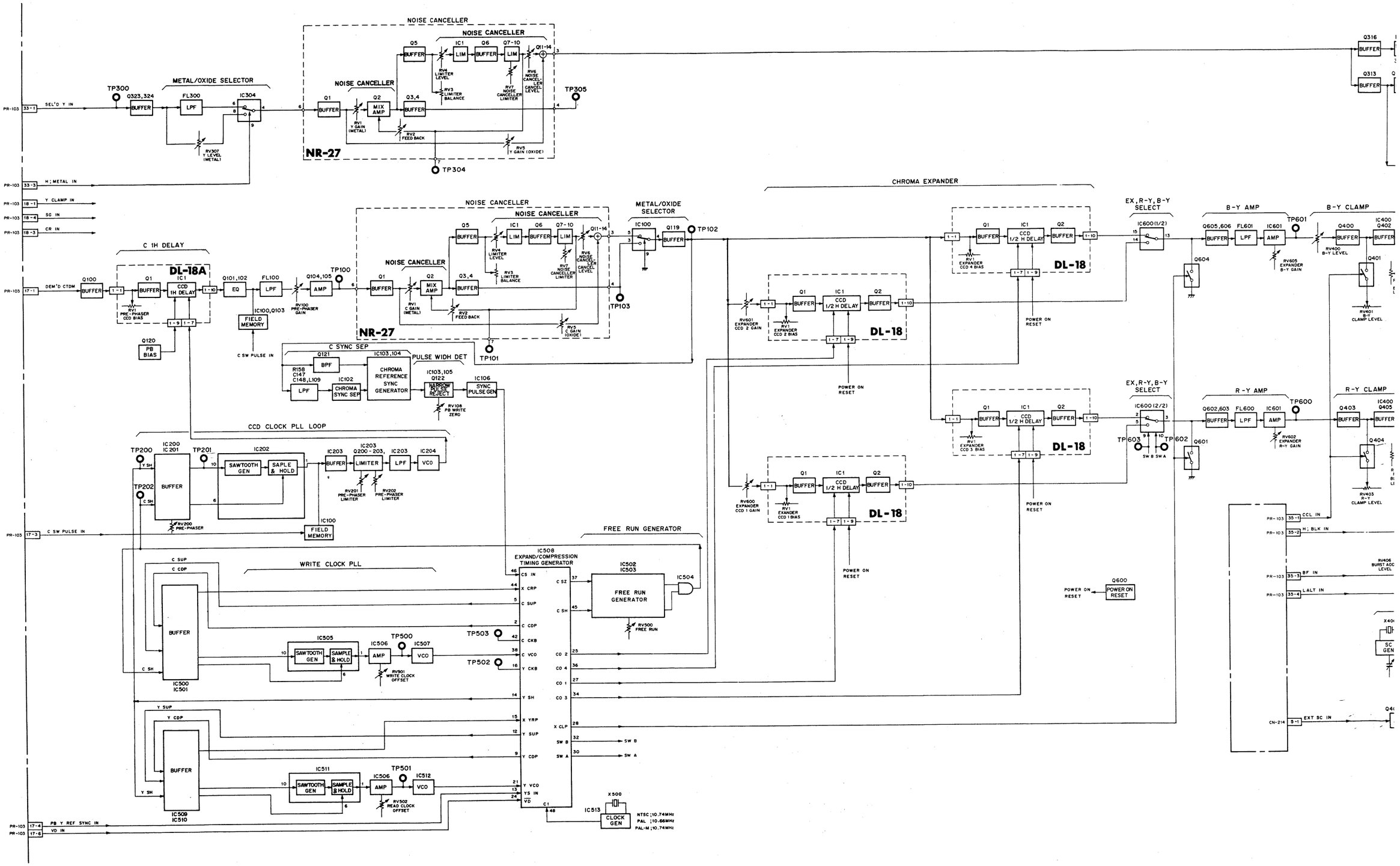


PR-103
PR-103P

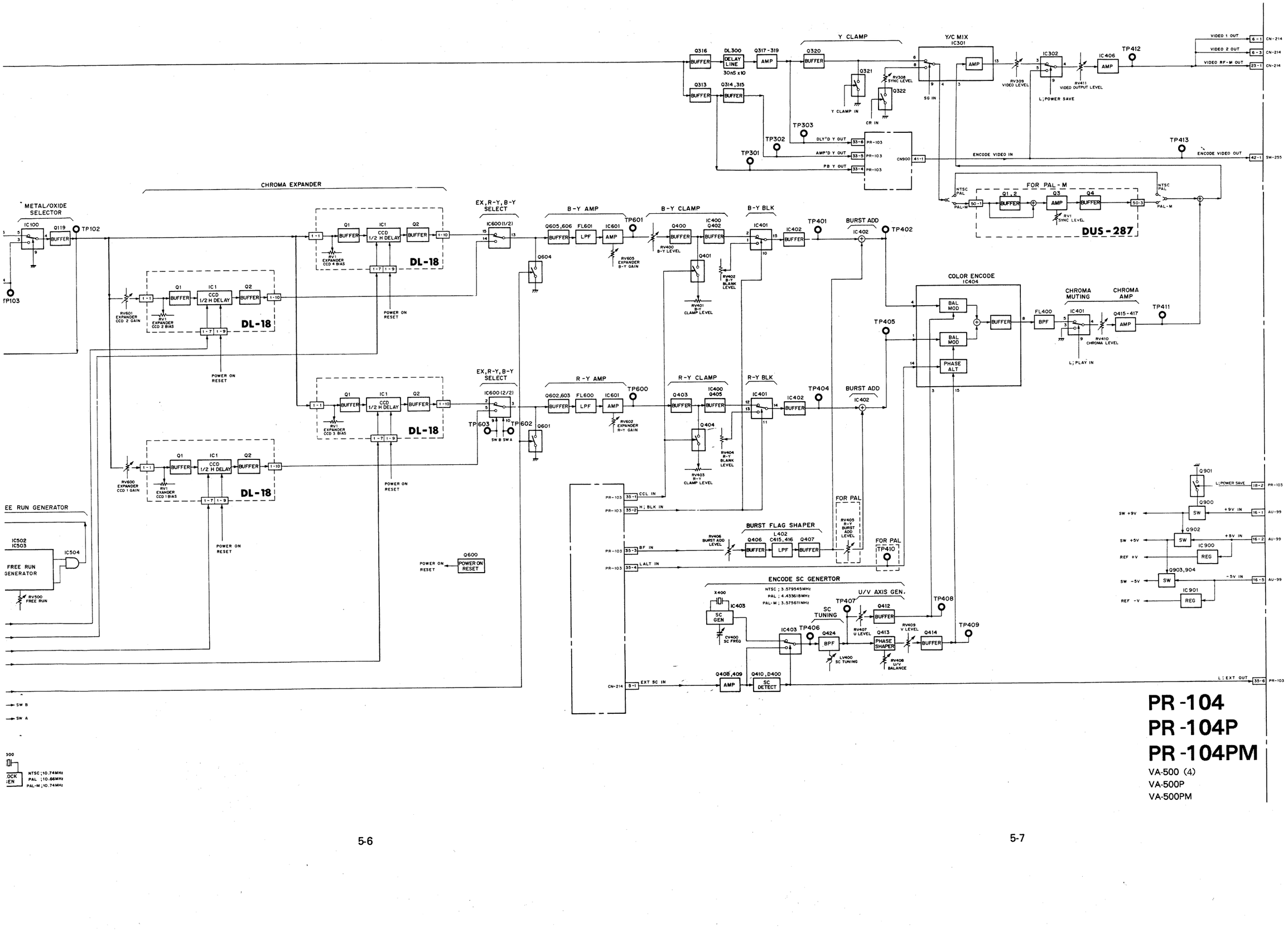
VA-500 (4)
VA-500P

CTDM EXPANDER AND CHROMA ENCODE, Y/C MIX

CTDM EXPANDER AND CHROMA ENCODE, Y/C MIX



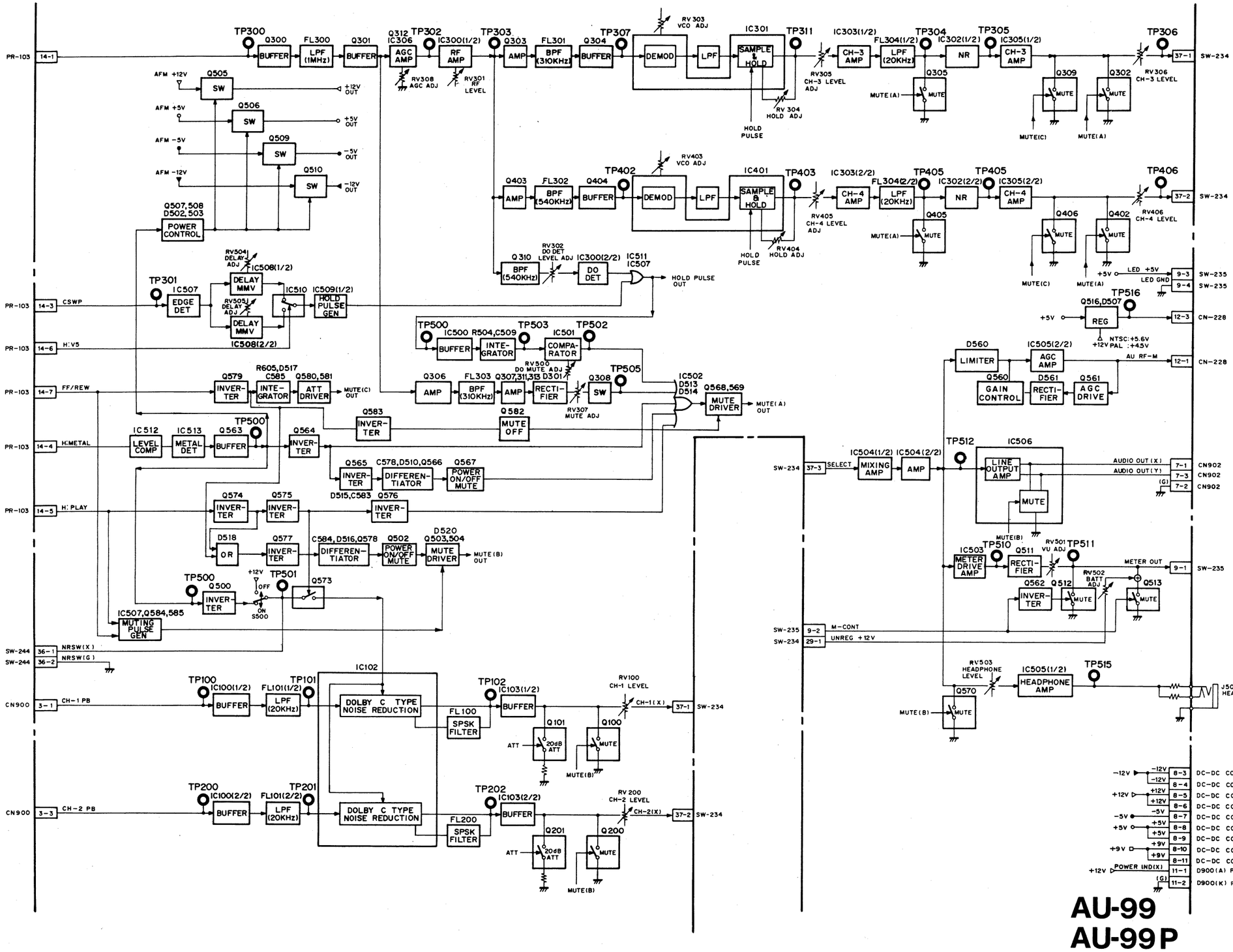
CTDM EXPANDER AND CHROMA ENCODE, Y/C MIX



PR-104
PR-104P
PR-104PM

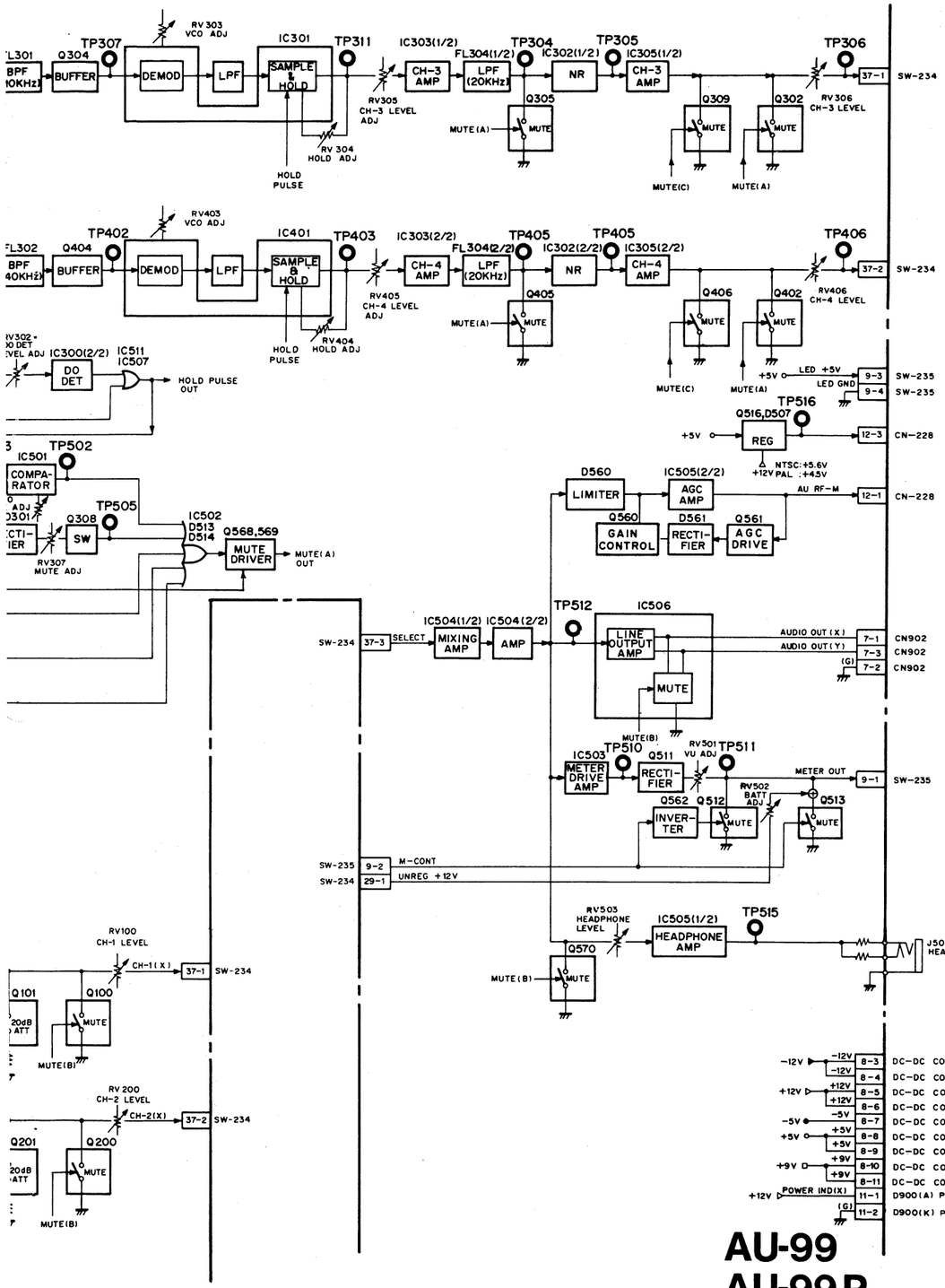
VA-500 (4)
VA-500P
VA-500PM

AUDIO SYSTEM



AU-99
AU-99P

VA-500 (2)
VA-500P



AU-99
AU-99P

VA-500 (2)
VA-500P

SECTION 6
SEMICONDUCTOR ELECTRODES

ここに記載されているIC，トランジスタ，ダイオードは，それぞれの機能を等価的に表わしたものです。したがって互換性を表わすものではありません。（互換性のない型名が併記されている事もあります。）部品の交換をする時は，SPARE PARTSの章を参照して下さい。

ICs, transistors and diodes whoses functions are equivalent are described here. Therefore, incompatible device names may be described together. For parts replacement, refer to the Spare Parts section in this manual.

等価回路はICメーカーのData Bookに従いました。

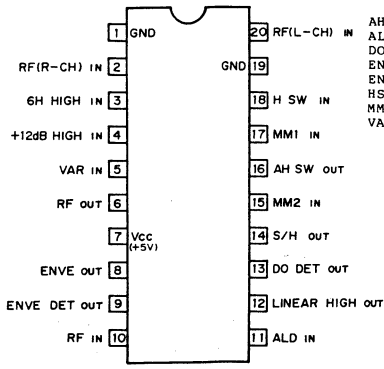
The circuit diagram of each IC is obtained from the IC data book published by the manufacturer.

IC

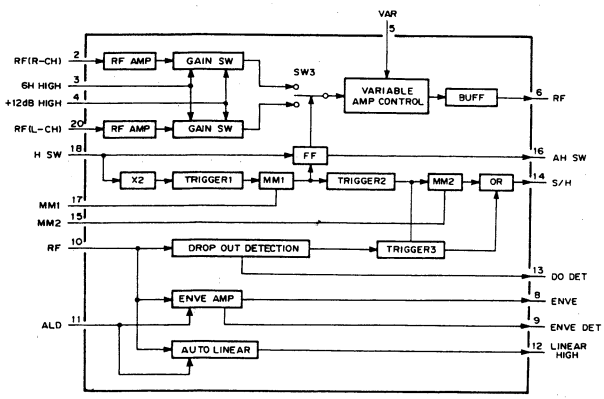
AN3920K (MATSUSHITA)

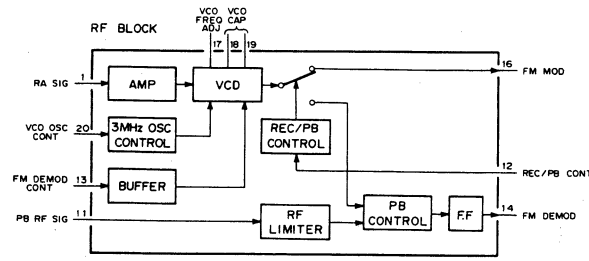
VTR FM AUDIO RF AMP

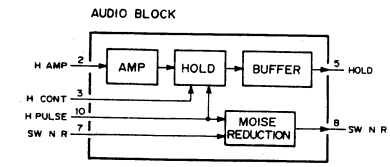
— TOP VIEW —




```
AHSW      ; AUDIO HOLD SWITCH OUTPUT
ALD       ; AUTO LINEAR DETECT INPUT
DO DET    ; DROP OUT DETECT OUTPUT
ENVE      ; ENVELOPE OUTPUT
ENVE DET  ; ENVELOPE DETECTOR OUTPUT
HSW       ; HOLD SWITCH INPUT
MM1,2     ; MONO MULTI
VAR       ; VARIABLE AMP CONTROL INPUT
```



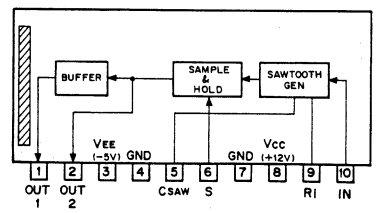




BX1461 (SONY)

PHASE DETECTOR

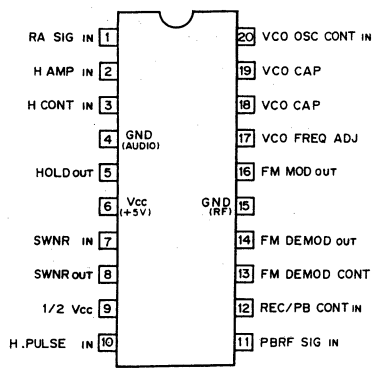
— PRINTED SIDE —



AN3922NK (MATSUSHITA)

VTR, FM AUDIO MODULATOR AND DEMODULATOR

— TOP VIEW —

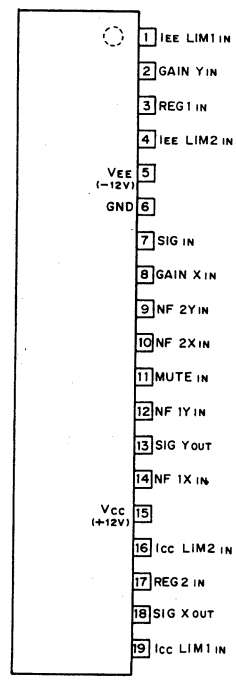


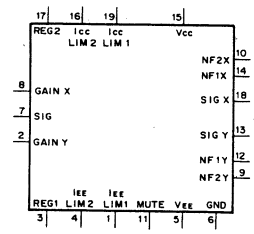

```
FM DEMOD       ; FM DEMODULATION OUTPUT
FM DEMOD CONT  ; FM DEMODULATION CONTROL INPUT
FM MOD         ; FM MODULATION OUTPUT
H AMP          ; HOLD AMP INPUT
H CONT         ; HOLD CONTROL INPUT
H PULSE        ; HOLD PULSE INPUT
PBRF SIG       ; PB RF SIGNAL INPUT
RA SIG         ; REC AUDIO SIGNAL INPUT
REC/PB CONT    ; REC/PB CONTROL INPUT
SWNR           ; SWITCH NOISE REDUCTION INPUT/OUTPUT
VCO CAP        ; VCO CAPACITOR
VCO FREQ ADJ   ; VCO FREQUENCY ADJUSTMENT
VCO OSC CONT   ; VCO OSCILLATION CONTROL INPUT
```

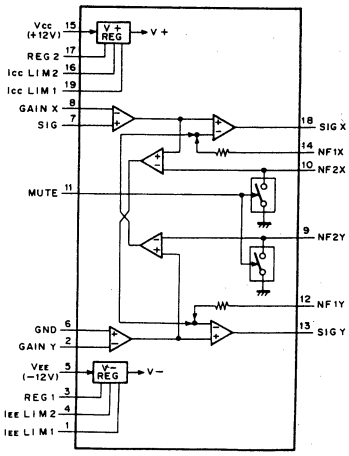
BX1481 (SONY)

AUDIO LINE AMPLIFIER

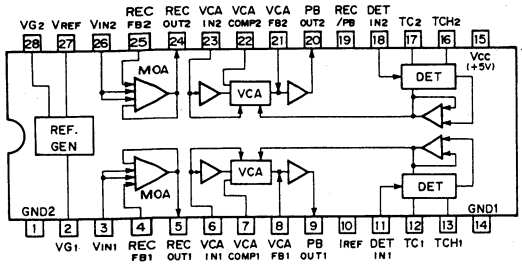
— REAR VIEW —





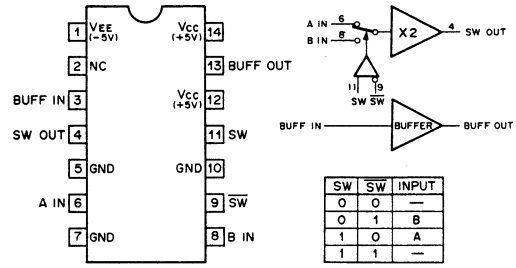


CX20099 (SONY)
VOLTAGE CONTROLLED AMP/DETECTOR/MAIN OPERATIONAL AMP
— TOP VIEW —



DET ; DETECTOR
TC ; TIME CONSTANT
TCH ; TIME CONSTANT HOLD
VCA ; VOLTAGE CONTROLLED AMP

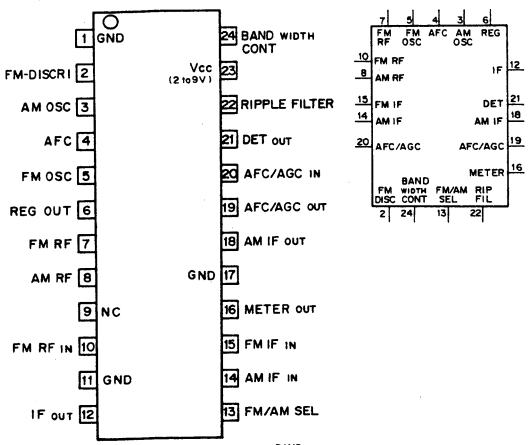
CX20158 (SONY)
VIDEO SWITCHER AND BUFFER
— TOP VIEW —

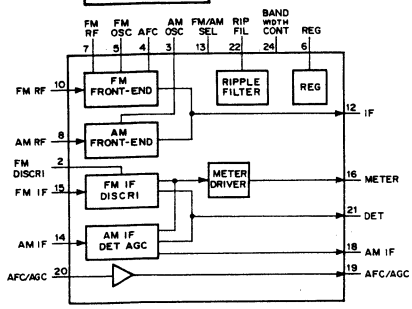


SW	$\overline{SW}$	INPUT
0	0	—
0	1	B
1	0	A
1	1	—

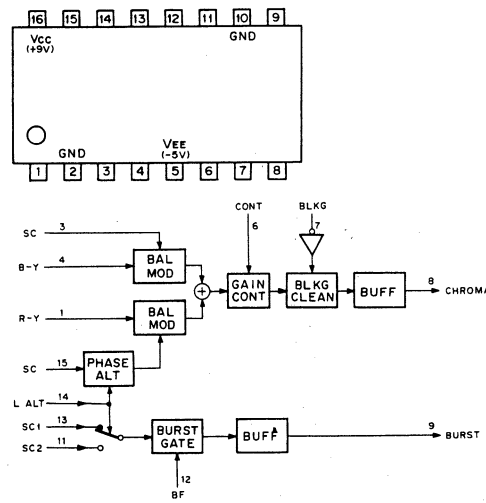
0 ; LOW LEVEL
1 ; HIGH LEVEL
— ; INDEFINITE

CX20111 (SONY) FLAT PACKAGE
FM/AM FRONT-END/IF/DET PROCESSOR
— TOP VIEW —





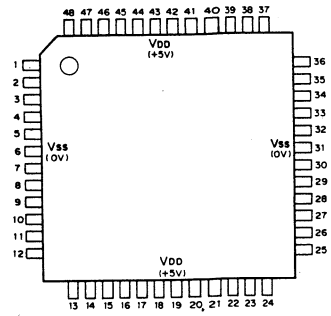
CX22017 (SONY)
VIDEO SIGNAL PROCESSOR
— TOP VIEW —



CX23084 (SONY) FLAT PACKAGE

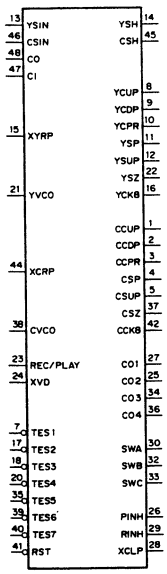
C-MOS TIMING GENERATOR/CCD CLOCK GENERATOR

— TOP VIEW —

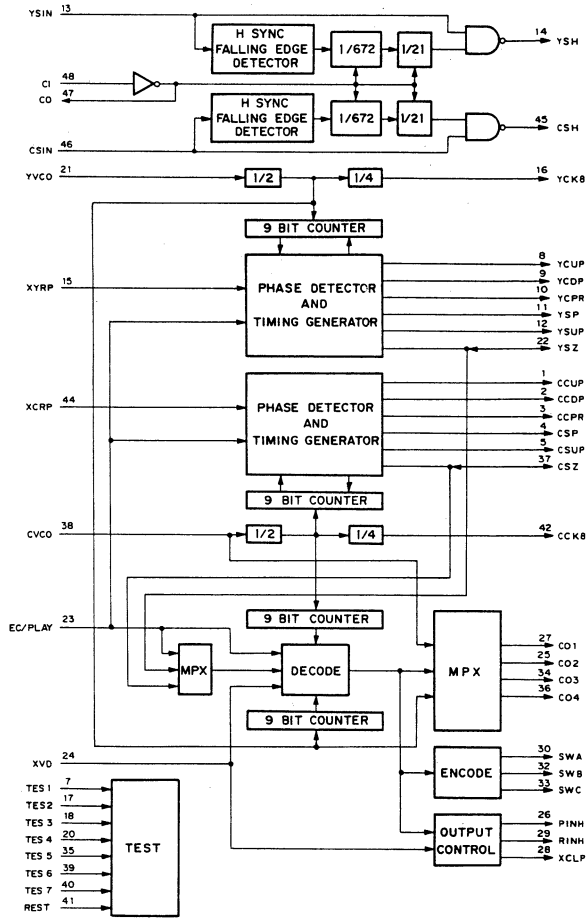


PIN ASSIGNMENT

PIN NO	IN	OUT	SYMBOL	PIN NO	IN	OUT	SYMBOL	PIN NO	IN	OUT	SYMBOL	PIN NO	IN	OUT	SYMBOL
1		○	CCUP	13	○		YSIN	25		○	CO2	37	○	○	CSZ
2		○	CCDP	14		○	YSH	26		○	PINH	38	○		CVCO
3		○	CCPR	15	○		XYRP	27		○	CO1K	39	○		$\overline{TES6}$
4		○	CSP	16		○	YCK8	28		○	XCLP	40	○		$\overline{TES7}$
5		○	CSUP	17	○		$\overline{TES2}$	29		○	RINH	41	○		$\overline{RST}$
6			Vss	18	○		$\overline{TES3}$	30		○	SWA	42		○	CCK8
7	○		$\overline{TES1}$	19			VDD	31			Vss	43			VDD
8		○	YCUP	20	○		$\overline{TES4}$	32		○	SWB	44	○		XCRP
9		○	YCDP	21	○		YVCO	33		○	SWC	45		○	CSH
10		○	YCPR	22	○	○	YSZ	34		○	CO3	46	○		CSIN
11		○	YSP	23	○		REC/PLAY	35	○		$\overline{TES5}$	47		○	CO
12		○	YSUP	24	○		XVD	36		○	CO4	48	○		CI



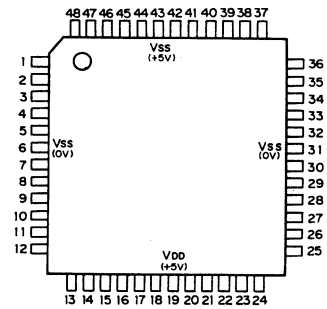
CCDP ; CHROMA CHARGE DOWN PULSE OUT
CCK8 ; CHROMA VCO 1/8 COUNT DOWN OUT
CCPR ; CHROMA CHARGE PUMP RESET PULSE OUT
CCUP ; CHROMA CHARGE UP PULSE OUT
CI ; CLOCK IN(SELECTED H)
CO ; CLOCK OUT(SELECTED H)
CO1-4 ; CLOCK OUT(CCD DRIVE)
CSH ; CHROMA SELECTED H OUT
CSIN ; CHROMA HORIZONTAL SYNC IN
CSP ; CHROMA SAMPLING PULSE OUT
CSUP ; CHROMA SPEED UP PULSE OUT
CSZ ; CHROMA SYNC ZERO OUT(PLAYBACK)
CVCO ; CHROMA VCO CLOCK IN
PINH ; PLAY INHIBIT OUT
REC/PLAY ; REC/PLAY SELECT IN
RST ; RESET IN
RINH ; REC INHIBIT OUT
SWA,SWB,SWC ; CCD READ DATA SELECT A,B,C OUT
TES1-7 ; TEST1-7 IN
XCLP ; CHROMA CLAMP OUT
XCRP ; CHROMA VCO RESET PULSE IN
XYRP ; Y VCO RESET PULSE
XVD ; VD IN
YCDP ; Y CHARGE DOWN PULSE OUT
YCK8 ; Y VCO 1/8 COUNT DOWN OUT
YCPR ; Y CHARGE PUMP RESET PULSE OUT
YCUP ; Y CHARGE UP PULSE OUT
YSH ; Y SELECTED H OUT
YSIN ; Y HORZONTAL SYNC IN
YSP ; Y SAMPLING PULSE OUT
YSUP ; Y SPEED UP PULSE OUT
YSZ ; Y SYNC ZERO (RECORD)
YVCO ; Y VCO CLOCK IN



CX7993A (SONY) FLAT PACKAGE

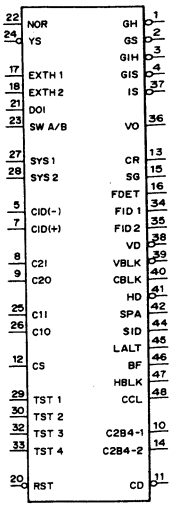
C-MOS TIMING GENERATOR

— TOP VIEW —

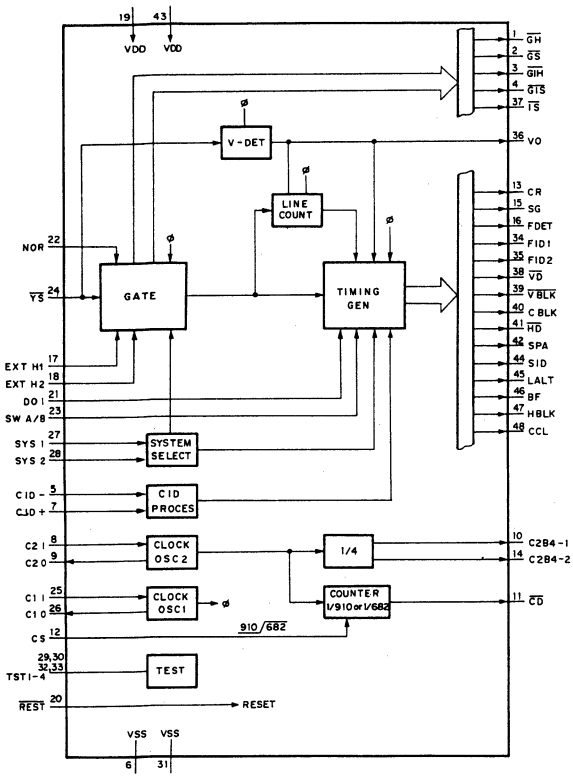


PIN ASSIGNMENT

PIN NO	IN	OUT	SYMBOL	PIN NO	IN	OUT	SYMBOL	PIN NO	IN	OUT	SYMBOL	PIN NO	IN	OUT	SYMBOL
1		○	$\overline{GH}$	13		○	CR	25	○		C11	37		○	$\overline{TS}$
2		○	$\overline{GS}$	14		○	C2B4-2	26		○	C10	38		○	$\overline{VD}$
3		○	$\overline{GIH}$	15		○	SG	27	○		SYS1	39		○	$\overline{VBLK}$
4		○	$\overline{GIS}$	16		○	FDET	28	○		SYS2	40		○	CBLK
5	○		CID −	17	○		EXTH1	29			T1	41		○	$\overline{HD}$
6			Vss	18	○		EXTH2	30			T2	42		○	SPA
7	○		CID +	19			VDD	31			Vss	43			VDD
8	○		C21	20	○		$\overline{RST}$	32			T3	44		○	SID
9		○	C20	21	○		DO1	33			T4	45		○	LALT
10		○	C2B4-1	22	○		NOR	34		○	FID1	46		○	BF
11		○	$\overline{CD}$	23	○		SW A/B	35		○	FID2	47		○	HBLK
12	○		CS	24	○		$\overline{YS}$	36		○	VO	48		○	CCL



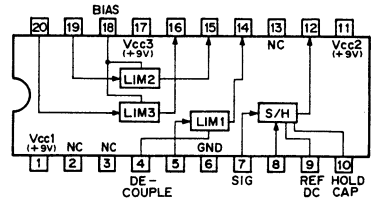
BF	;	BURST FLAG OUT
CII	;	CLOCK 1 IN
CIO	;	CLOCK 1 OUT
C2B4-1	;	CLOCK 2/4-1
C2B4-2	;	CLOCK 2/4-2
C2I	;	CLOCK 2 IN
C2O	;	CLOCK 2 OUT
CBLK	;	CHROMA BLANKING PULSE OUT
CCL	;	CHROMA CLAMP
CD	;	COUNT DOWN SIGNAL
CID+,CID-	;	CHROMA ID +,- IN
CR	;	CORRECT SYNC OUT
CS	;	COUNTER SELECT IN
EXTH 1	;	EXTERNAL H-1
EXTH 2	;	EXTERNAL H-2
FDET	;	FRAME DET OUT
FID1 FID2	;	FRAME ID 1,2 OUT
GH	;	GATED H OUT
GIH	;	GATE/INTERPORATED H OUT
GIS	;	GATE/INTERPORATED SYNC OUT
GS	;	GATED SYNC OUT
HBLK	;	H-BLANKING PULSE OUT
HD	;	HD OUT
IS	;	INTERPORATED SYNC OUT
LALT	;	LINE ALTERNATE OUT
NOR	;	MODE SELECT(NORMAL/SERCH) IN
RST	;	RESET IN
SG	;	SYNC GATE OUT
SID	;	SECAM ID OUT
SPA	;	SECAM PHASE ALTERNATE OUT
SW A/B	;	Y SWITCHING PULSE A/B IN
SYS1,SYS2	;	SYSTEM SELECT 1,2 IN
TST1,TST2	;	TEST1,TEST2
VBLK	;	V-BLANKING PULSE OUT
VD	;	VD OUT
VO	;	V OUT
YS	;	Y SYNC OUT



CXA1039M (SONY) FLAT PACKAGE

DETAIL ENHANCER LIMITER

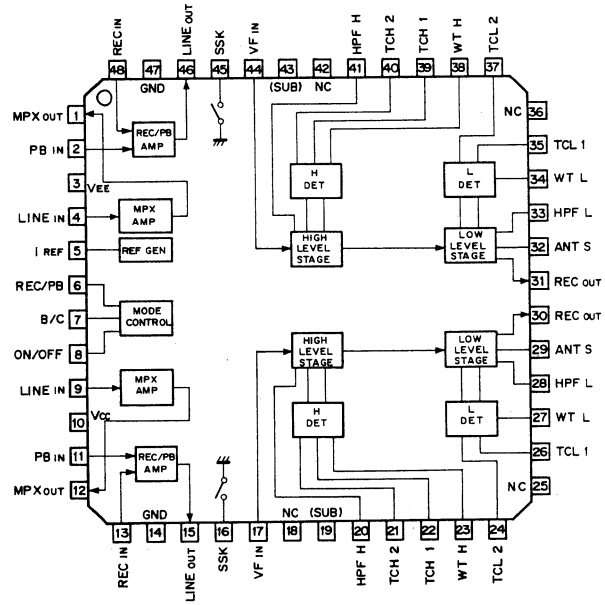
— TOP VIEW —



CXA1097Q (SONY) FLAT PACKAGE

DOLBY TYPE-B/C NOISE REDUCTION

— TOP VIEW —

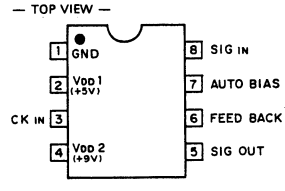


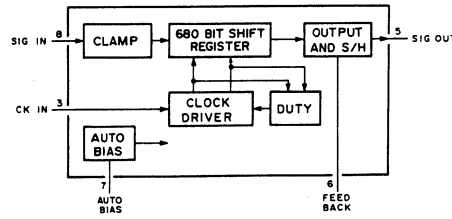
ANT S	;	ANTI-SATURATION
B/C	;	DOLBY TYPE-B/-C SELECT
HPF H	;	HPF FOR HIGH-LEVEL-STAGE
HPF L	;	HPF FOR LOW-LEVEL-STAGE
IREF	;	REFERENT CURRENT SOURCE
ON/OFF	;	DOLBY NR ON/OFF SELECT
REC/PB	;	REC/PB SELECT
SSK	;	SPECTRAL SKEWING SWITCH
TCH 1	;	TIME CONSTANT-1 FOR HLS*1
TCH 2	;	TIME CONSTANT-2 FOR HLS
TCL 1	;	TIME CONSTANT-1 FOR LLS*2
TCL 2	;	TIME CONSTANT-2 FOR LLS
VF IN	;	ENCODER INPUT
WT H	;	WEIGHTING FOR HLS
WT L	;	WEIGHTING FOR LLS
*1: HIGH-LEVEL-STAGE		
*2: LOW-LEVEL-STAGE		

CXL5001M (SONY) FLAT PACKAGE

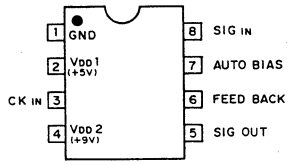
C-MOS CCD FOR NTSC 1H DELAY LINE

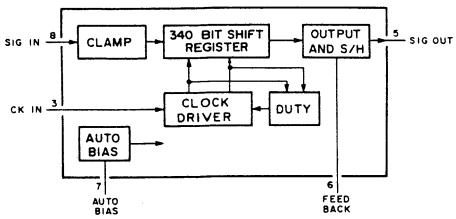
— TOP VIEW —



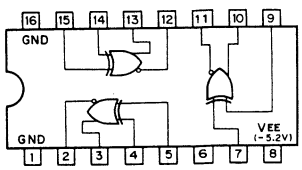


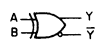
CXL5002M (SONY) FLAT PACKAGE
C-MOS CCD FOR NTSC 1/2H DELAY LINE
— TOP VIEW —





MC10H107M (MOTOROLA) FLAT PACKAGE
ECL EXCLUSIVE OR/NOR GATE
— TOP VIEW —

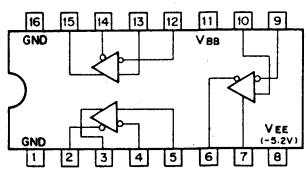




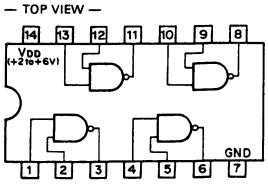
A	B	Y	$\overline{Y}$
0	0	0	1
0	1	1	0
1	0	1	0
1	1	0	1

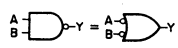
0;LOW LEVEL
1;HIGH LEVEL

MC10H116M (MOTOROLA) FLAT PACKAGE
ECL DIFFERENTIAL OR/NOR LINE RECEIVER
— TOP VIEW —



MC74HC00F (MOTOROLA) FLAT PACKAGE
TC74HC00F (TOSHIBA) FLAT PACKAGE
C-MOS 2-INPUT NAND GATE
— TOP VIEW —

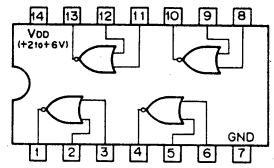


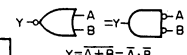


A	B	Y
0	0	1
0	1	1
1	0	1
1	1	0

0;LOW LEVEL
1;HIGH LEVEL

MC74HC02F (MOTOROLA) FLAT PACKAGE
TC74HC02F (TOSHIBA) FLAT PACKAGE
C MOS 2-INPUT POSITIVE-NOR GATE
— TOP VIEW —



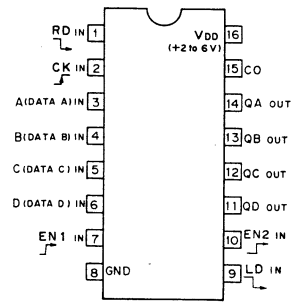


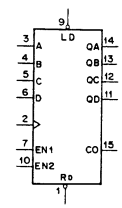
$Y = \overline{A+B} = \overline{A} \cdot \overline{B}$

A	B	Y
0	0	1
0	1	0
1	0	0
1	1	0

0;LOW LEVEL
1;HIGH LEVEL

MC74HC163F (MOTOROLA) FLAT PACKAGE
TC74HC163F (TOSHIBA) FLAT PACKAGE
C-MOS PRESETTABLE SYNCHRONOUS 4-BIT BINARY COUNTER
— TOP VIEW —

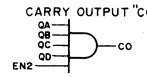




MODE SELECTION

CONTROL INPUTS				MODE
RD	LD	EN1	EN2	
0	X	X	X	RESET (SYNCHRONOUS)
1	0	X	X	PRESET (SYNCHRONOUS)
1	1	0	X	NO COUNT
1	1	X	0	NO COUNT
1	1	1	1	COUNT

CARRY OUTPUT "CO"

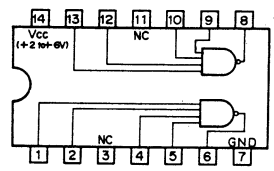


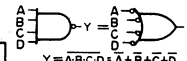
CO IS HIGH WHEN EN2 INPUT IS HIGH AND COUNT IS "15"

COUNT SEQUENCE

COUNT	OUTPUTS			
	QD	QC	QB	QA
0	0	0	0	0
1	0	0	0	1
2	0	0	1	0
3	0	0	1	1
4	0	1	0	0
5	0	1	0	1
6	0	1	1	0
7	0	1	1	1
8	1	0	0	0
9	1	0	0	1
10	1	0	1	0
11	1	0	1	1
12	1	1	0	0
13	1	1	0	1
14	1	1	1	0
15	1	1	1	1

MC74HC20F (MOTOROLA) FLAT PACKAGE
TC74HC20F (TOSHIBA) FLAT PACKAGE
C-MOS 4-INPUT POSITIVE-NAND GATE
— TOP VIEW —



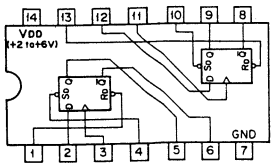


$Y = \overline{A \cdot B \cdot C \cdot D} = \overline{A} + \overline{B} + \overline{C} + \overline{D}$

A	B	C	D	Y
0	0	0	0	1
0	0	0	1	1
0	0	1	0	1
0	0	1	1	1
0	1	0	0	1
:	:	:	:	:
1	1	0	1	1
1	1	1	0	1
1	1	1	1	0

0;LOW LEVEL
1;HIGH LEVEL

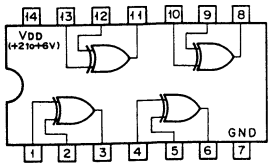
MC74HC74F (MOTOROLA) FLAT PACKAGE
TC74HC74F (TOSHIBA) FLAT PACKAGE
C-MOS D-TYPE FLIP FLOP WITH DIRECT SET/RESET
— TOP VIEW —



INPUTS				OUTPUTS	
So	Ro	CK	D	Qn+1	Qn+1
0	1	X	X	1	0
1	0	X	X	0	1
0	0	X	X	1*	1*
1	1	↑	1	1	0
1	1	↑	0	0	1
1	1	0	X	Qn	$\overline{Qn}$

0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE
1*; NONSTABLE

MC74HC86F (MOTOROLA) FLAT PACKAGE
TC74HC86F (TOSHIBA) FLAT PACKAGE
C-MOS EXCLUSIVE OR GATE
— TOP VIEW —

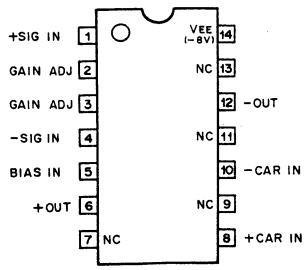


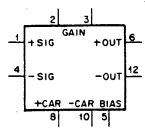
$Y = \overline{A} \cdot B + A \cdot \overline{B}$

A	B	Y
0	0	0
0	1	1
1	0	1
1	1	0

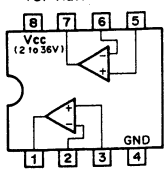
0; LOW LEVEL
1; HIGH LEVEL

NJM1496M (JRC) FLAT PACKAGE
BALANCED MODULATOR/DEMODULATOR
— TOP VIEW —

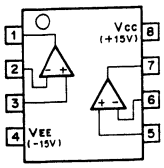




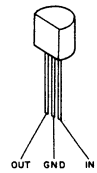
NJM2903M (JRC) FLAT PACKAGE
uPC393G2 (NEC) FLAT PACKAGE
VOLTAGE COMPARATOR
— TOP VIEW —



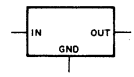
NJM4560M (JRC) FLAT PACKAGE
OPERATIONAL AMPLIFIER
— TOP VIEW —



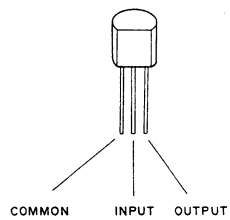
NJM78L??A (NEC)
POSITIVE VOLTAGE REGULATOR (100mA)



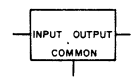
OUTPUT VOLTAGE	NJM78L??A
+2.6V	NJM78L02A
+5V	NJM78L05A



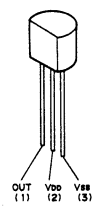
NJM79L??A (JRC)
NEGATIVE VOLTAGE REGULATOR (100mA)
— FRONT VIEW —



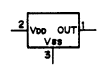
OUTPUT VOLTAGE	NJM79L??A
-3V	NJM79L03A



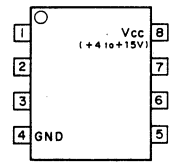
S-805??(SEIKO I AND E)
VOLTAGE DETECTOR

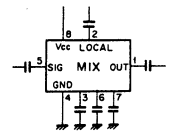


DETECTION RANGE (V)	S-805??
3.10 - 3.40	S-8053 ALR



SN16913P (TI)
BALANCED MIXER
— TOP VIEW —

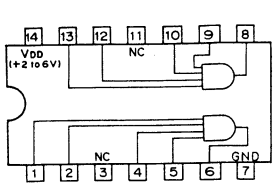


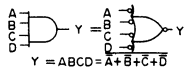


SN74HC21NS (TI) FLAT PACKAGE

C-MOS 4-INPUT POSITIVE AND GATE

— TOP VIEW —





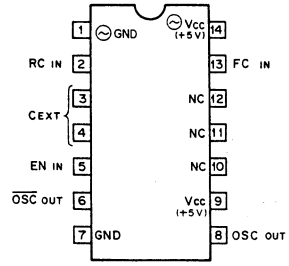
A	B	C	D	Y
0	0	0	0	0
0	0	0	1	0
0	0	1	0	0
0	0	1	1	0
0	1	0	0	0
:	:	:	:	:
1	1	0	1	0
1	1	1	0	0
1	1	1	1	1

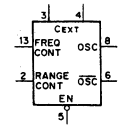
0 ; LOW LEVEL
1 ; HIGH LEVEL

SN74LS624NS (TI) FLAT PACKAGE

TTL VOLTAGE CONTROLLED OSCILLATOR

— TOP VIEW —





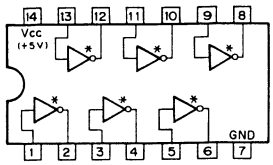
EN	OSC	$\overline{OSC}$
0	ENABLE	ENABLE
1	0	1

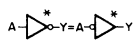
0 ; LOW LEVEL
1 ; HIGH LEVEL

SN74LS06NS (TI) FLAT PACKAGE

TTL INVERTER BUFFER/DRIVER WITH OPEN-COLLECTOR

— TOP VIEW —





Y = $\overline{A}$

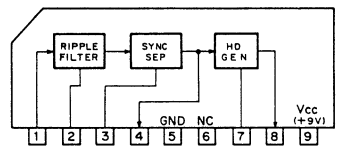
A	Y
0	1
1	0

0 ; LOW LEVEL
1 ; HIGH LEVEL
* ; OPEN COLLECTOR

TA7357AP (TOSHIBA)

SYNC SEPARATOR/HD PULSE GENERATOR

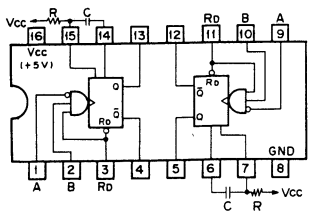
— SIDE VIEW —



SN74LS123NS (TI) FLAT PACKAGE

TTL RETRIGGERABLE MONOSTABLE MULTIVIBRATOR WITH DIRECT RESET

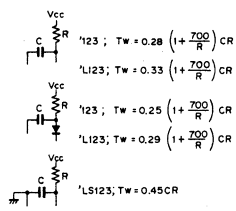
— TOP VIEW —



INPUTS			OUTPUTS	
$\overline{R_D}$	A	B	Q	$\overline{Q}$
0	X	X	0	1
X	1	X	0	1
X	X	0	0	1
1	0	↑	⊓	⊔
1	↓	1	⊓	⊔
↑	0	1	⊓	⊔

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE

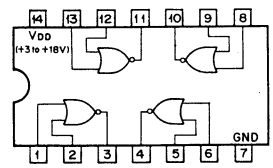
OUTPUT PULSE WIDTH

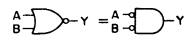


TC4001BF (TOSHIBA) FLAT PACKAGE

C-MOS 2-INPUT NOR GATE

— TOP VIEW —





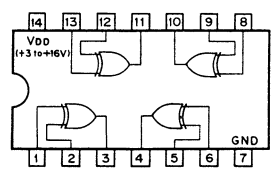
A	B	Y
0	0	1
0	1	0
1	0	0
1	1	0

0 ; LOW LEVEL
1 ; HIGH LEVEL

TC4030BFHB (TOSHIBA) FLAT PACKAGE

C-MOS EXCLUSIVE OR GATE

— TOP VIEW —



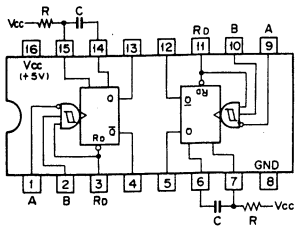
A	B	Y
0	0	0
0	1	1
1	0	1
1	1	0

0 ; LOW LEVEL
1 ; HIGH LEVEL

SN74LS221NS (TI) FLAT PACKAGE

TTL MONOSTABLE MULTIVIBRATOR WITH SCHMITT TRIGGER INPUT

— TOP VIEW —



INPUTS			OUTPUTS	
$\overline{R_D}$	A	B	Q	$\overline{Q}$
0	X	X	0	1
X	1	X	0	1
X	X	0	0	1
1	0	↑	⊓	⊔
1	↓	1	⊓	⊔
↑	0	1	⊓	⊔

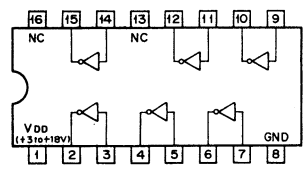
0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE

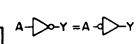
OUTPUT PULSE WIDTH = 0.7CR

TC4049BF (TOSHIBA) FLAT PACKAGE

C-MOS INVERTING TYPE BUFFER/CONVERTER

— TOP VIEW —



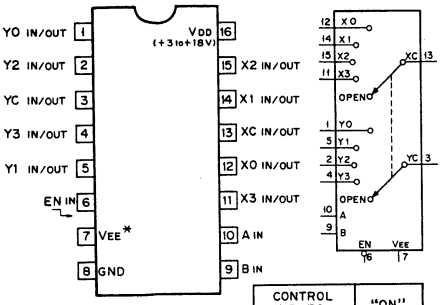


Y = $\overline{A}$

A	Y
0	1
1	0

0 ; LOW LEVEL
1 ; HIGH LEVEL

TC4052BFHB (TOSHIBA) FLAT PACKAGE
C-MOS 4-CHANNEL MULTIPLEXER/DEMULTIPLEXER
— TOP VIEW —

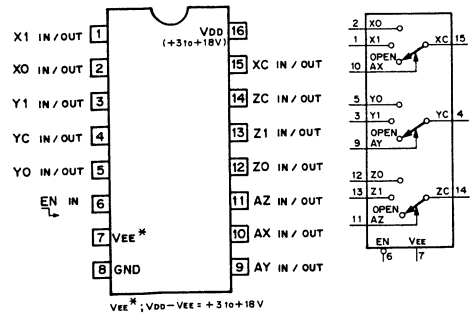


VEE*; VDD − VEE = +3 to +18V

CONTROL INPUTS			"ON" CHANNEL
EN	B	A	
0	0	0	0
0	0	1	1
0	1	0	2
0	1	1	3
1	X	X	OPEN

0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE

TC4053BFHB (TOSHIBA) FLAT PACKAGE
C-MOS 2-CHANNEL MULTIPLEXER/DEMULTIPLEXER
— TOP VIEW —

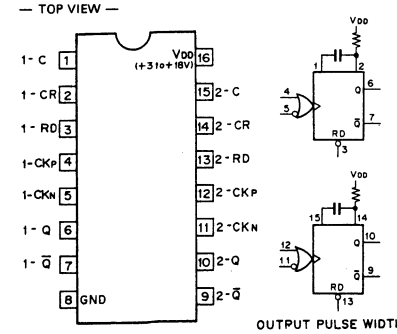


VEE*; VDD − VEE = +3 to +18V

CONT. INPUTS		ON CHANNEL
EN	A (X, Y, Z)	
0	0	0
0	1	1
1	X	OPEN

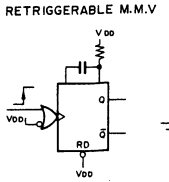
0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE.

TC4538BF (TOSHIBA) FLAT PACKAGE
C-MOS DUAL RETRIGGERABLE/NON-RETRIGGERABLE MONOSTABLE MULTIVIBRATOR
— TOP VIEW —

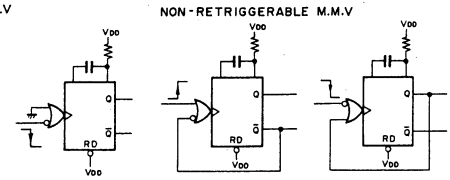


OUTPUT PULSE WIDTH = CR

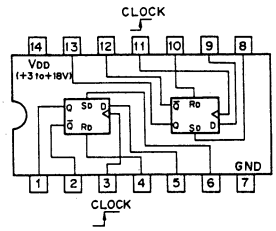
RETRIGGERABLE M.M.V



NON-RETRIGGERABLE M.M.V



TC504013BF (TOSHIBA) FLAT PACKAGE
C-MOS D-TYPE FLIP FLOP WITH DIRECT SET/RESET
— TOP VIEW —



DIRECT R-S FLIP FLOP

Sd	Rd	Q	Q̄
0	0	On	Ōn
0	1	0	1
1	0	1	0
1	1	0	1

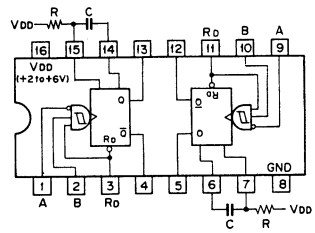
D-TYPE FLIP FLOP

CKn	CKn+1
D	Q
0	0
1	1

CLOCK CK; ⌐¬
CKn; BEFORE CLOCK
CKn+1; AFTER CLOCK

0; LOW LEVEL
1; HIGH LEVEL

TC74HC221F (TOSHIBA) FLAT PACKAGE
C-MOS MONOSTABLE MULTIVIBRATOR WITH SCHMITT TRIGGER INPUT
— TOP VIEW —

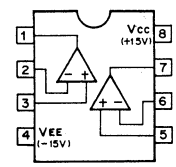


INPUTS			OUTPUTS	
RD	A	B	Q	Q̄
0	X	X	0	1
X	1	X	0	1
X	X	0	0	1
1	0	↑	⌐¬	⌐¬
1	↓	1	⌐¬	⌐¬
↑	0	1	⌐¬	⌐¬

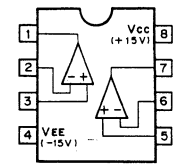
0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE

OUTPUT PULSE WIDTH = 0.7CR

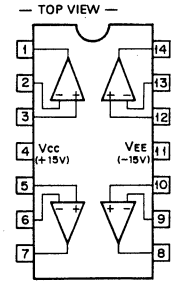
TL072CPS (TI) FLAT PACKAGE
OPERATIONAL AMPLIFIER
(LOW-NOISE, JFET-INPUT)
— TOP VIEW —



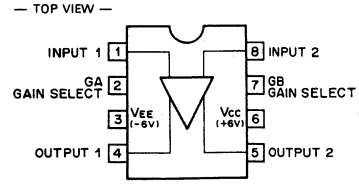
TL082CPS (TI) FLAT PACKAGE
uPC4082G2 (NEC) FLAT PACKAGE
OPERATIONAL AMPLIFIER
(J FET-INPUT)
— TOP VIEW —



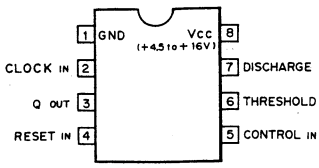
TL084CNS (TI) FLAT PACKAGE
OPERATIONAL AMPLIFIER
(J FET-INPUT)
— TOP VIEW —

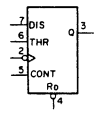


TL592PS (TI) FLAT PACKAGE
DIFFERENTIAL VIDEO AMPLIFIER
— TOP VIEW —

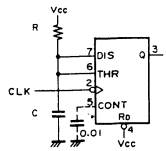


uPC1555C (NEC)
PRECISION TIMER
— TOP VIEW —



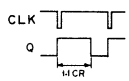


MONOSTABLE MULTIVIBRATOR

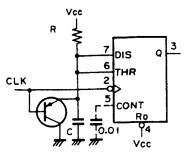


INPUTS		OUT
Ro	CLK	Q
0	X	0
1	⊓	⊓

0 , LOW LEVEL
1 , HIGH LEVEL
X , DON'T CARE

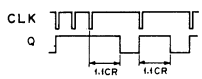


RETRIGGERABLE MONO. MULTIVIBRATOR
(MISSING PULSE DETECTOR)

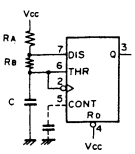


INPUTS		OUT
Ro	CLK	Q
0	X	0
1	⊓	⊓

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE



ASTABLE MULTIVIBRATOR

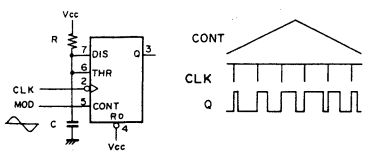


Ro	Q
0	0
1	⊓

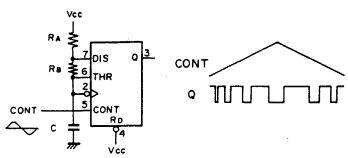
0 ; LOW LEVEL
1 ; HIGH LEVEL

$T_H = 0.693C\,(R_A + R_B)$
$T_L = 0.693C\,R_B$

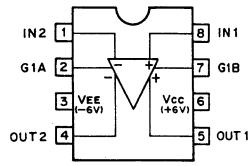
PULSE WIDTH MODULATOR



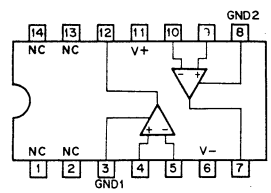
VCO
(PULSE POSITION MODULATOR)



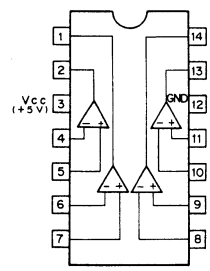
uPC1663G2 (NEC) FLAT PACKAGE
WIDEBAND VIDEO AMPLIFIER
— TOP VIEW —



uPC319G2 (NEC) FLAT PACKAGE
VOLTAGE COMPARATOR
— TOP VIEW —

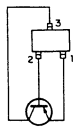


uPC339G2 (NEC) FLAT PACKAGE
COMPARATOR
— TOP VIEW —



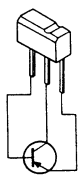
TRANSISTOR

TOP VIEW (SCALE 4/1)



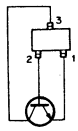
2SA1037K
2SA1162
2SA1179
2SA1226
2SA812

(SCALE 2/1)



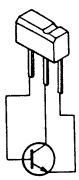
2SB793
2SB822

TOP VIEW (SCALE 4/1)



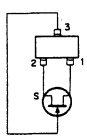
2SC1623
2SC2412K
2SC2712
2SC2714
2SC2715
2SC2812
2SC3052
2SC3326N

(SCALE 2/1)



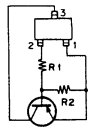
2SD1055
2SD973

TOP VIEW (SCALE 4/1)



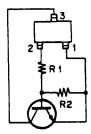
2SK209
2SK94

TOP VIEW (SCALE 4/1)



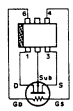
DTA114TK (R1=10K, R2=∞)
DTA114YK (R1=10K, R2=47K)
DTA144TK (R1=47K, R2=∞)

TOP VIEW (SCALE 4/1)

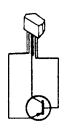


DTC114EK (R1=10K, R2=10K)
DTC114TK (R1=10K, R2=∞)
DTC114YK (R1=10K, R2=47K)
DTC124EK (R1=22K, R2=22K)
DTC143TK (R1=4.7K, R2=∞)
DTC144EK (R1=47K, R2=47K)
DTC144TK (R1=47K, R2=∞)

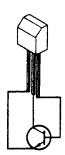
TOP VIEW



TX429M

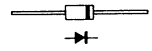


2SA1048



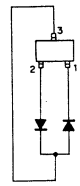
2SD774

DIODE



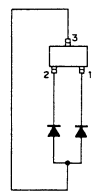
10E-2
1SS119
1SS131
ERA84-009

TOP VIEW (SCALE 4/1)



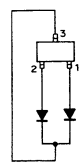
1SS123
DA204K
MA153

TOP VIEW (SCALE 4/1)



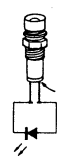
1S2835
DAP202K
MA151WA

TOP VIEW (SCALE 4/1)



1S2837
DAN202K
MA151WK

1T33

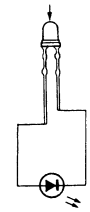


BD703G ; GREEN

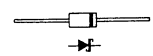
TOP VIEW (SCALE 4/1)

RD ? ?MB?

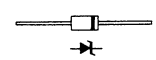
RADIATION SIDE



SLH-34YC3 ; YELLOW



ERC81-004



RD ? ?EB ?

SECTION 7
SCHEMATIC DIAGRAMS

回路図内において、REF. NO の近傍に下記記号が記載されていますが、これは生産時の部品データです。

In the schematic diagrams, the following marks are described nearby reference number. These are parts data at factory.

CAPACITOR (C)

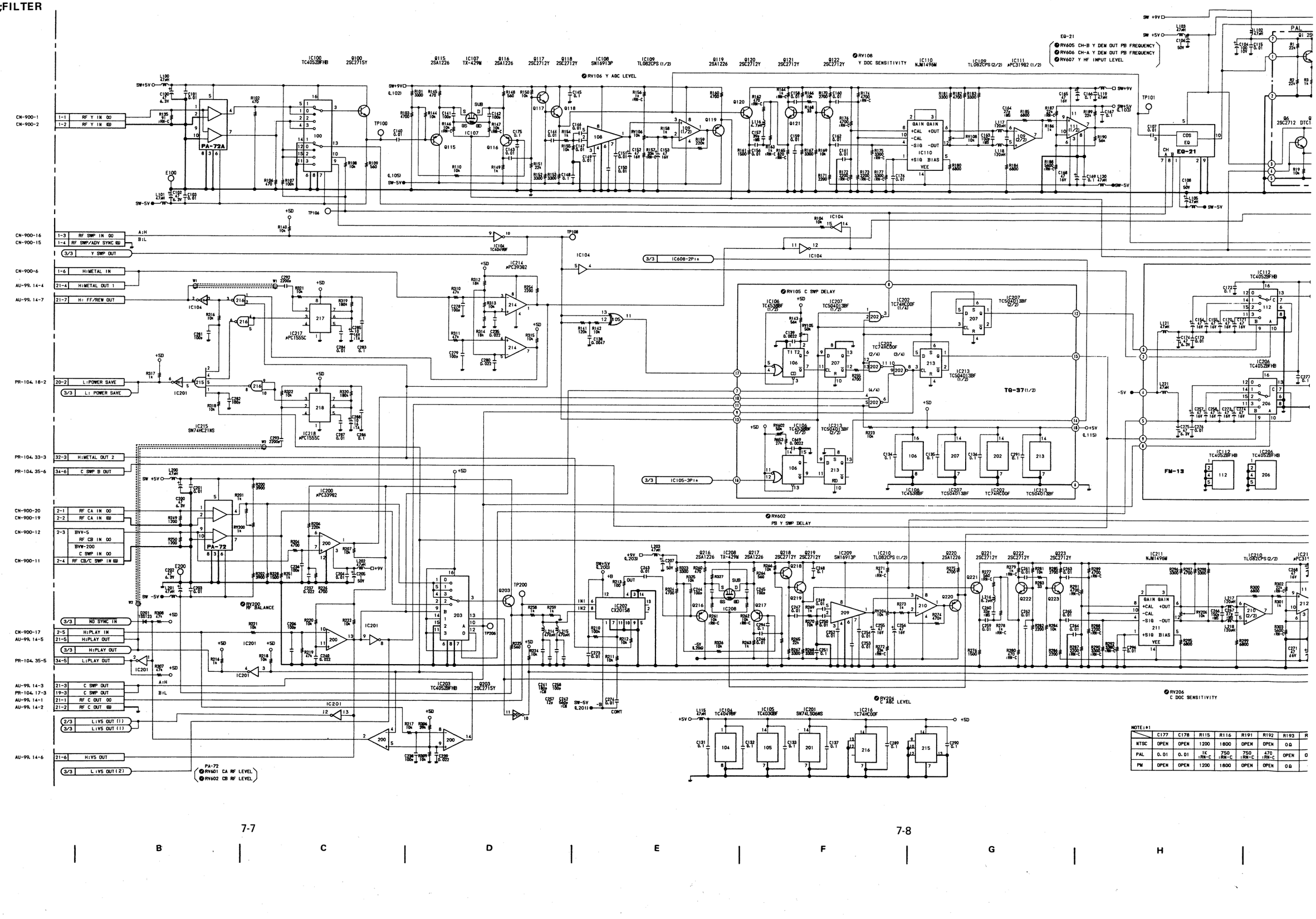
AL, AS	ELECTROLYTIC
TA	TANTALUM
CA, CC, CCS, CM, CS	CERAMIC
MPS, PP, PS, PT	MYLAR
MD	DIPPED MICA
MS	MICA

RESISTOR (R)
VARIABLE RESISTOR (RV)

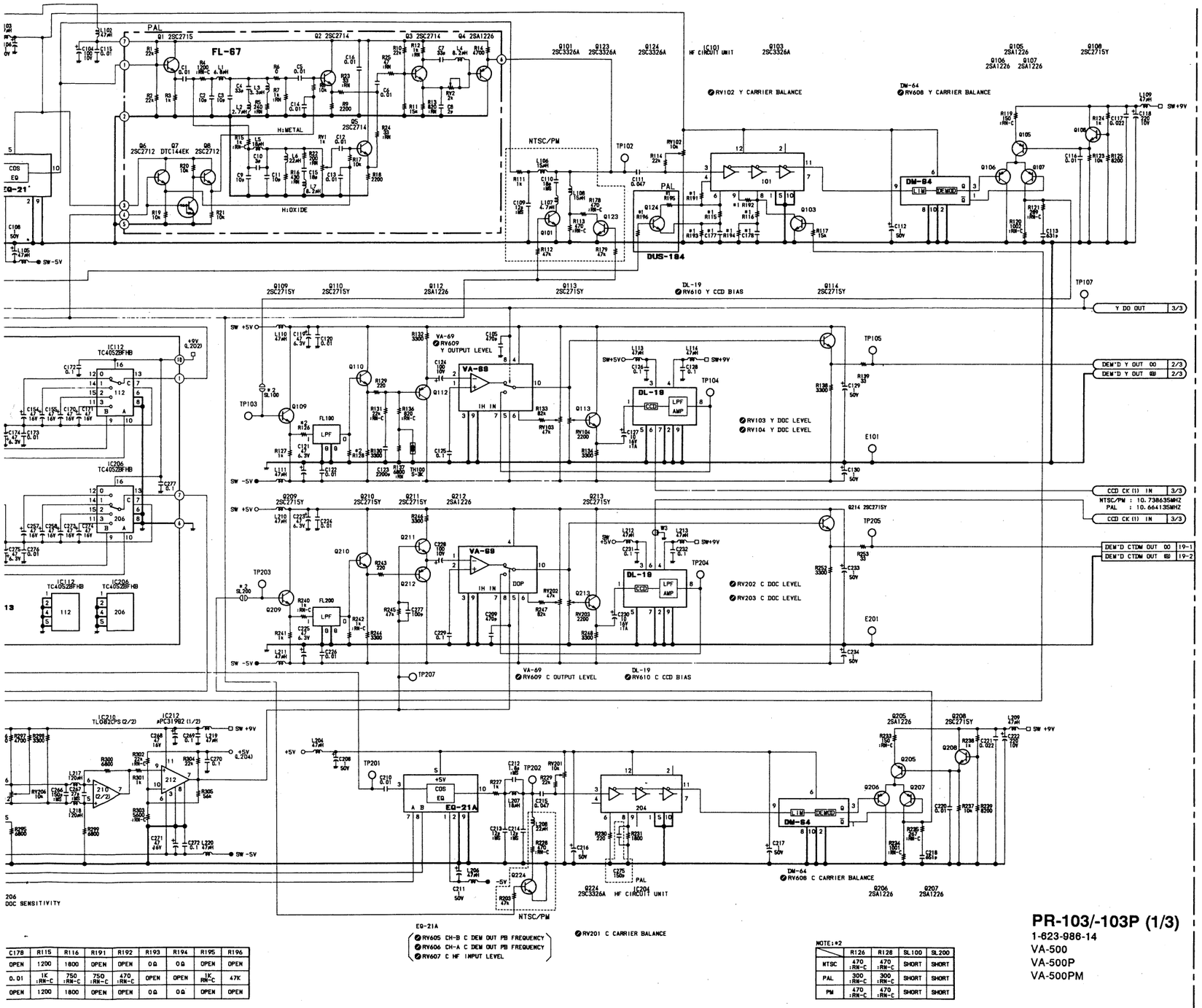
RC, RD	CARBON
RF	FUSE
RN, RS	METAL
RW	WIREWOUND

PR-103/-103P(1/3), DUS-194, FL-67

PR-103/-103P (1/3); VIDEO RF DEMODULATOR
DUS-194; SWITCH
FL-67;FILTER



NOTE:*1	C177	C178	R115	R116	R191	R192	R193
NTSC	OPEN	OPEN	1200	1800	OPEN	OPEN	0Ω
PAL	0.01	0.01	1K :RN-C	750 :RN-C	750 :RN-C	470 :RN-C	OPEN
FM	OPEN	OPEN	1200	1800	OPEN	OPEN	0Ω

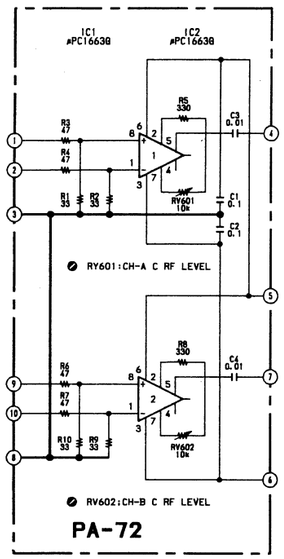


C178	R115	R116	R191	R192	R193	R194	R195	R196
OPEN	1200	1800	OPEN	OPEN	0Ω	0Ω	OPEN	OPEN
0.01	1K ±RN-C	750 ±RN-C	750 ±RN-C	470 ±RN-C	OPEN	OPEN	1K RN-C	47K
OPEN	1200	1800	OPEN	OPEN	0Ω	0Ω	OPEN	OPEN

NOTE:*2	R126	R128	SL100	SL200
NTSC	470 ±RN-C	470 ±RN-C	SHORT	SHORT
PAL	300 ±RN-C	300 ±RN-C	SHORT	SHORT
PM	470 ±RN-C	470 ±RN-C	SHORT	SHORT

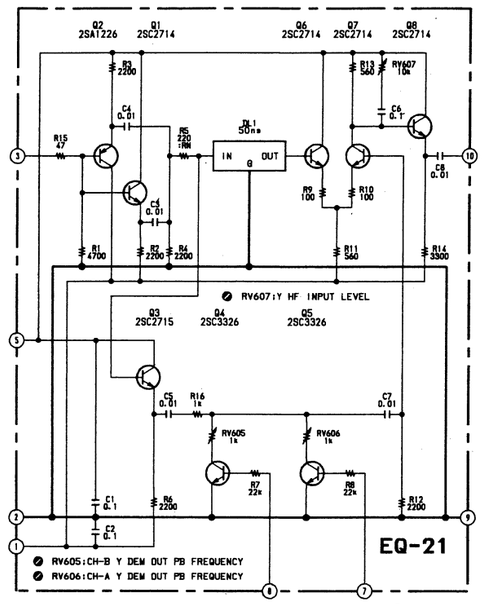
PR-103/-103P (1/3)
1-623-986-14
VA-500
VA-500P
VA-500PM

PA-72; RF AMP



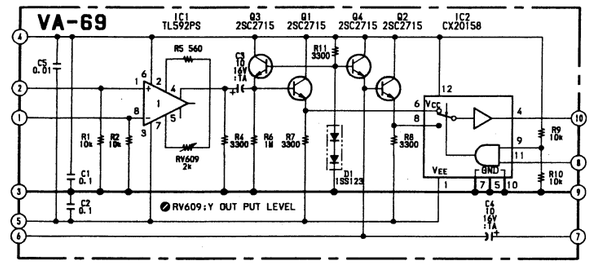
PA-72
1-623-998-11 (1)
VA-500
VA-500P

EQ-21; PHASE EQUALIZER



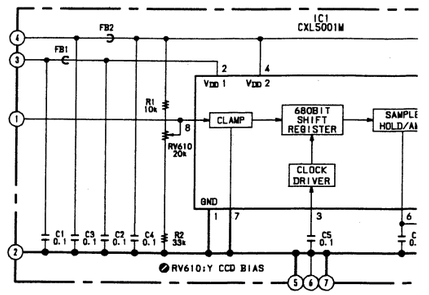
EQ-21
1-623-997-12 (2)
VA-500
VA-500P

VA-69; VIDEO AMP AND SWITCHER

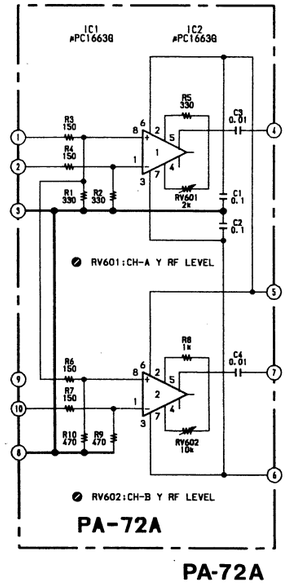


VA-69
1-623-999-11 (1)
VA-500
VA-500P

DL-19; CCD 1H DELAY LINE

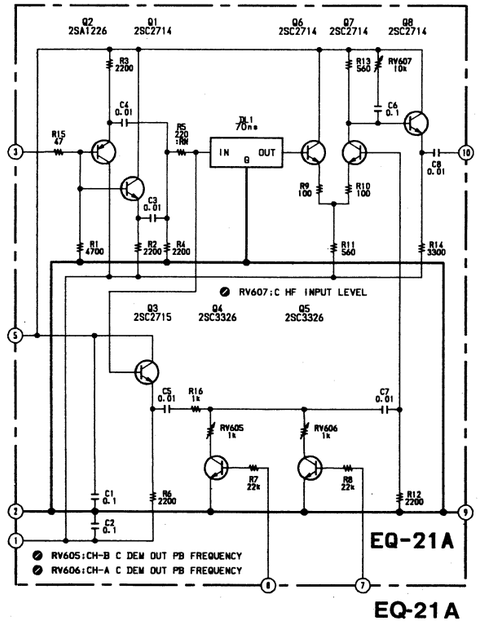


PA-72A; RF AMP



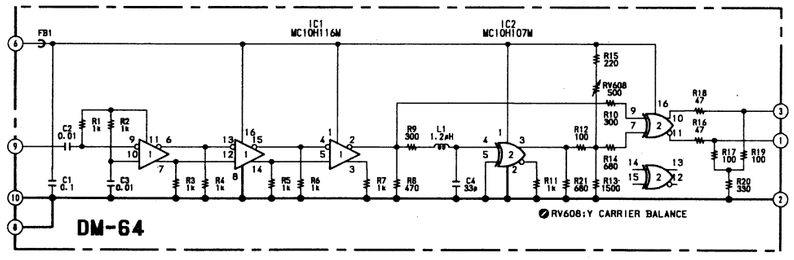
PA-72A
1-623-998-22 (2)
VA-500
VA-500P

EQ-21A; PHASE EQUALIZER



EQ-21A
1-623-997-22 (2)
VA-500
VA-500P

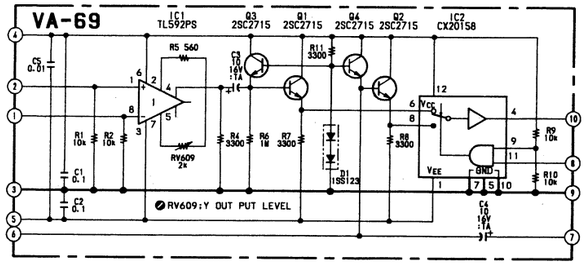
DM-64; LIMITER



DM-64
1-623-996-11 (2)
VA-500
VA-500P

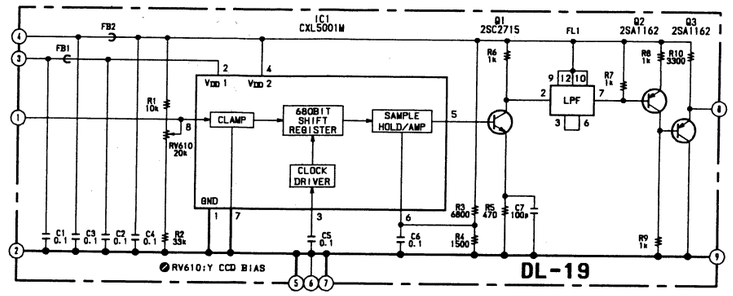
DL-19, DM-64, EQ-21/A, PA-72/A, TG-37, VA-69

VA-69; VIDEO AMP AND SWITCHER



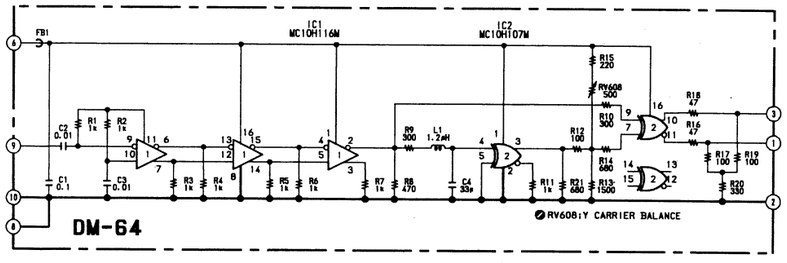
VA-69
1-623-999-11 (1)
VA-500
VA-500P

DL-19; CCD 1H DELAY LINE



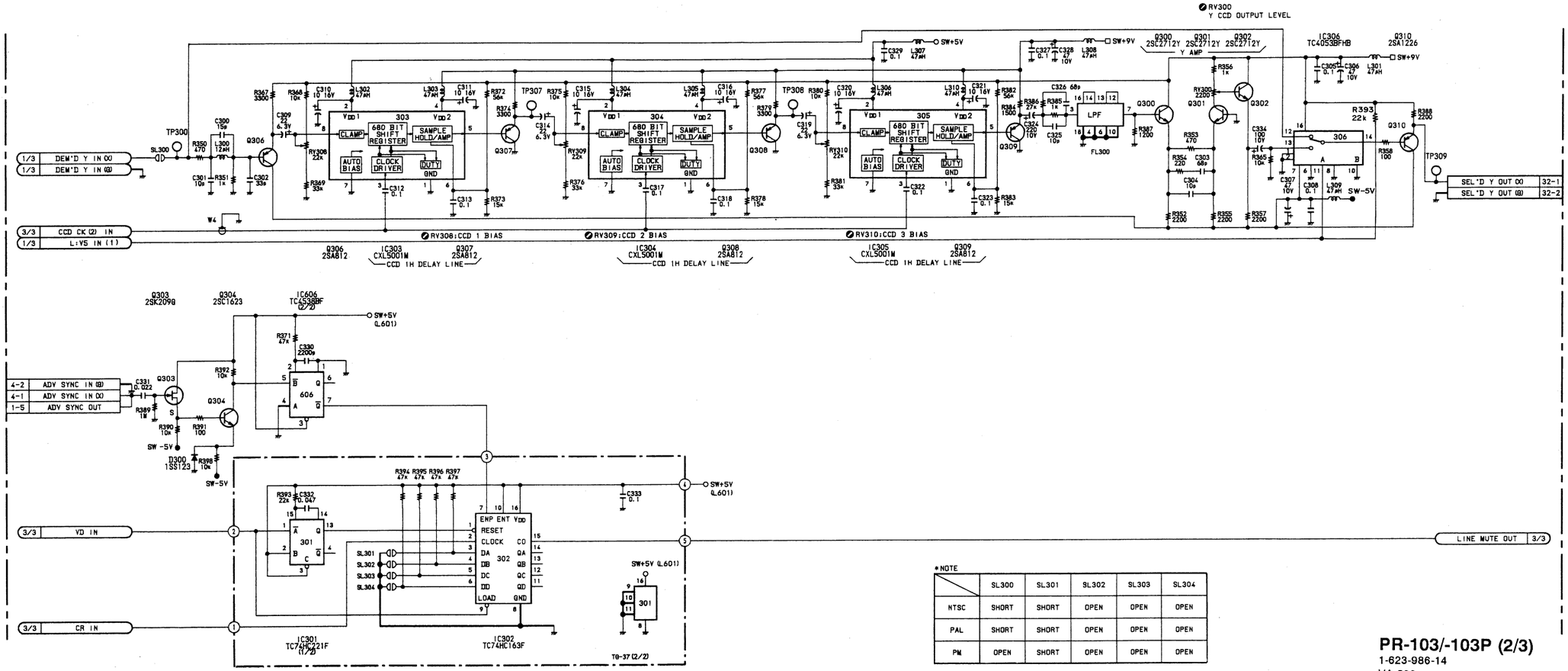
DL-19
1-623-995-12 (2)
VA-500
VA-500P

DM-64; LIMITER



DM-64
1-623-996-11 (2)
VA-500
VA-500P

PR-103/-103P(2/3); VIDEO RF DEMODULATOR

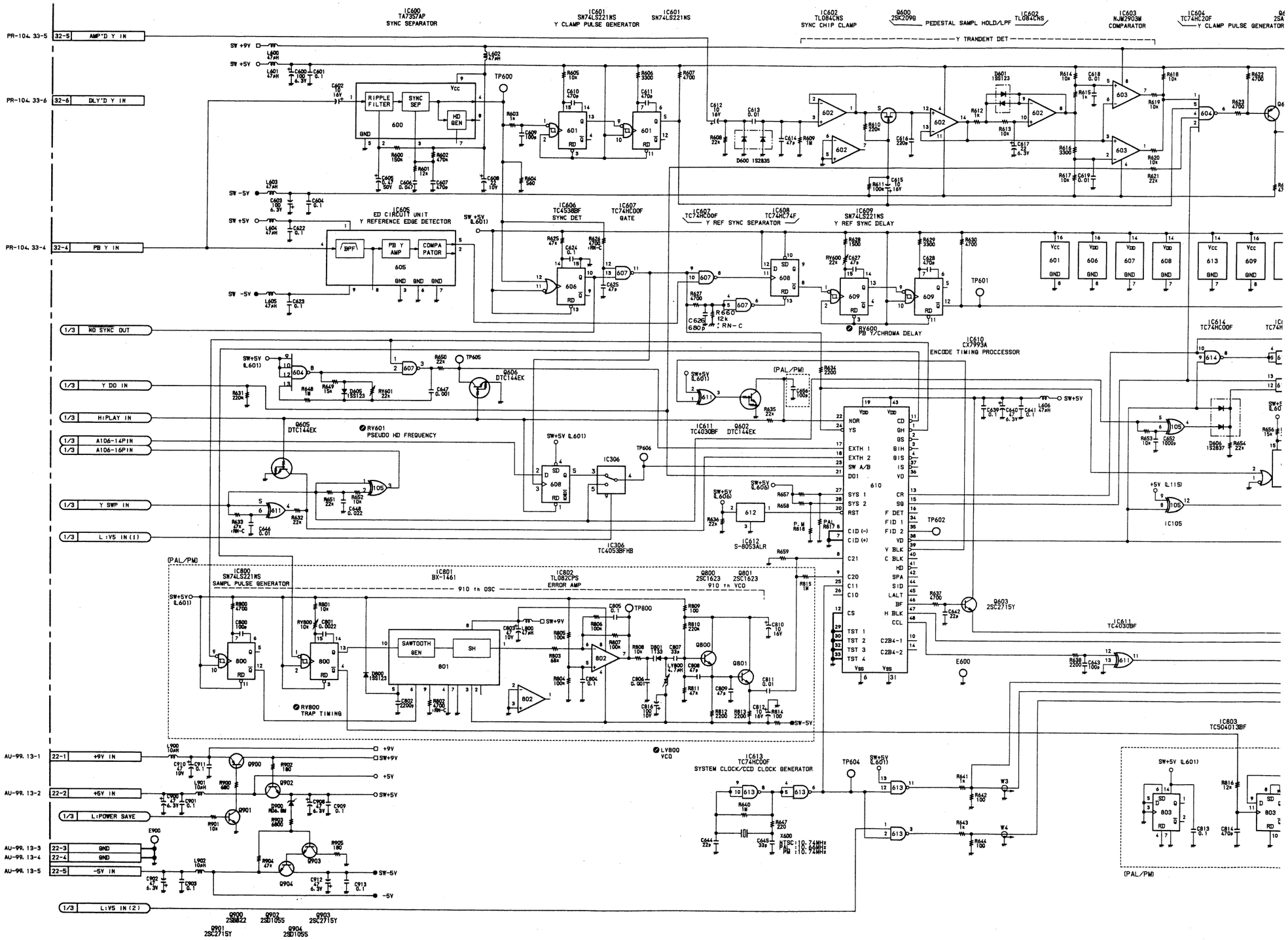


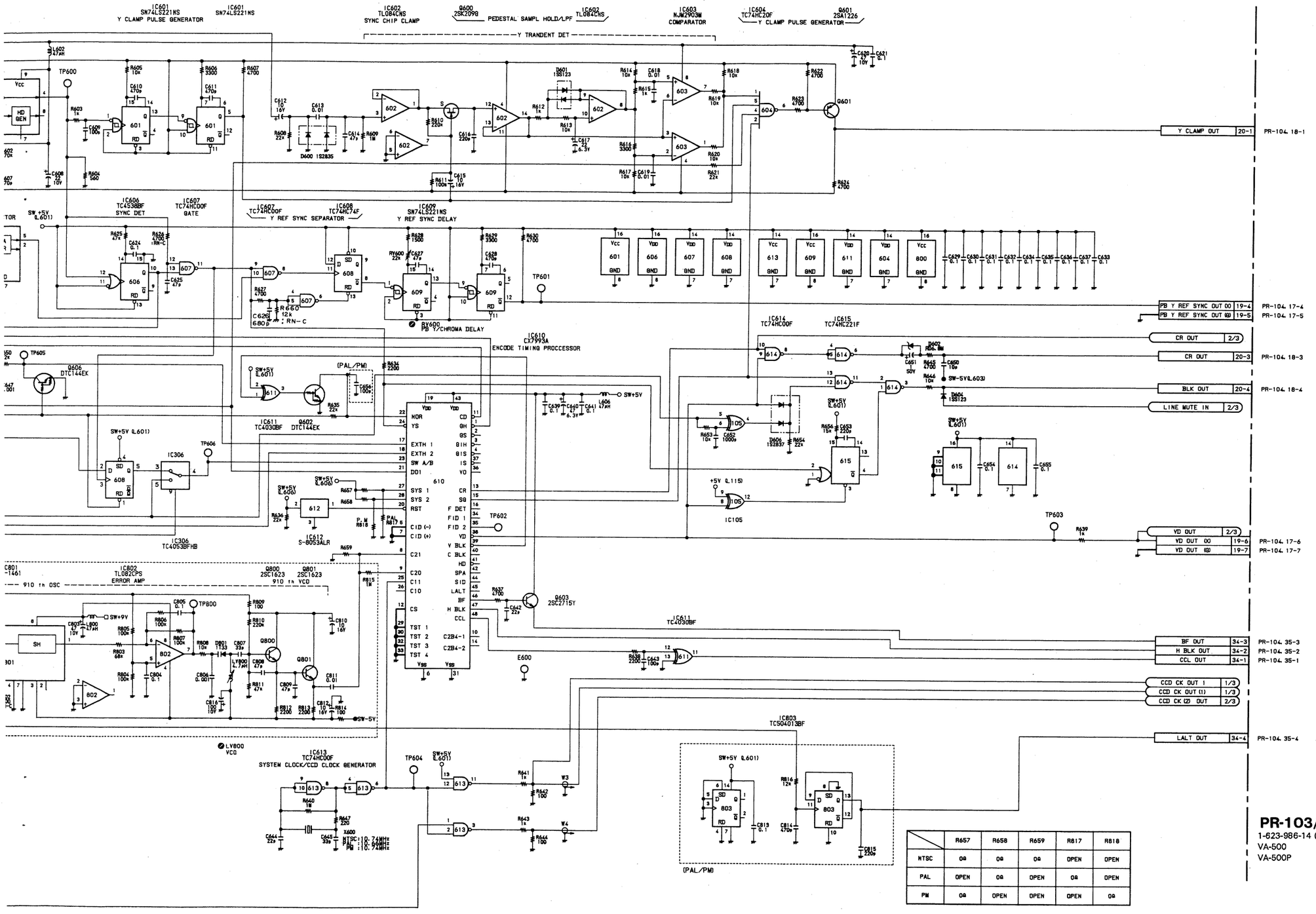
*NOTE

	SL300	SL301	SL302	SL303	SL304
NTSC	SHORT	SHORT	OPEN	OPEN	OPEN
PAL	SHORT	SHORT	OPEN	OPEN	OPEN
PM	OPEN	SHORT	OPEN	OPEN	OPEN

PR-103/-103P (2/3)
1-623-986-14
VA-500
VA-500P
VA-500PM

PR-103/-103P(3/3); VIDEO RF DEMODULATOR



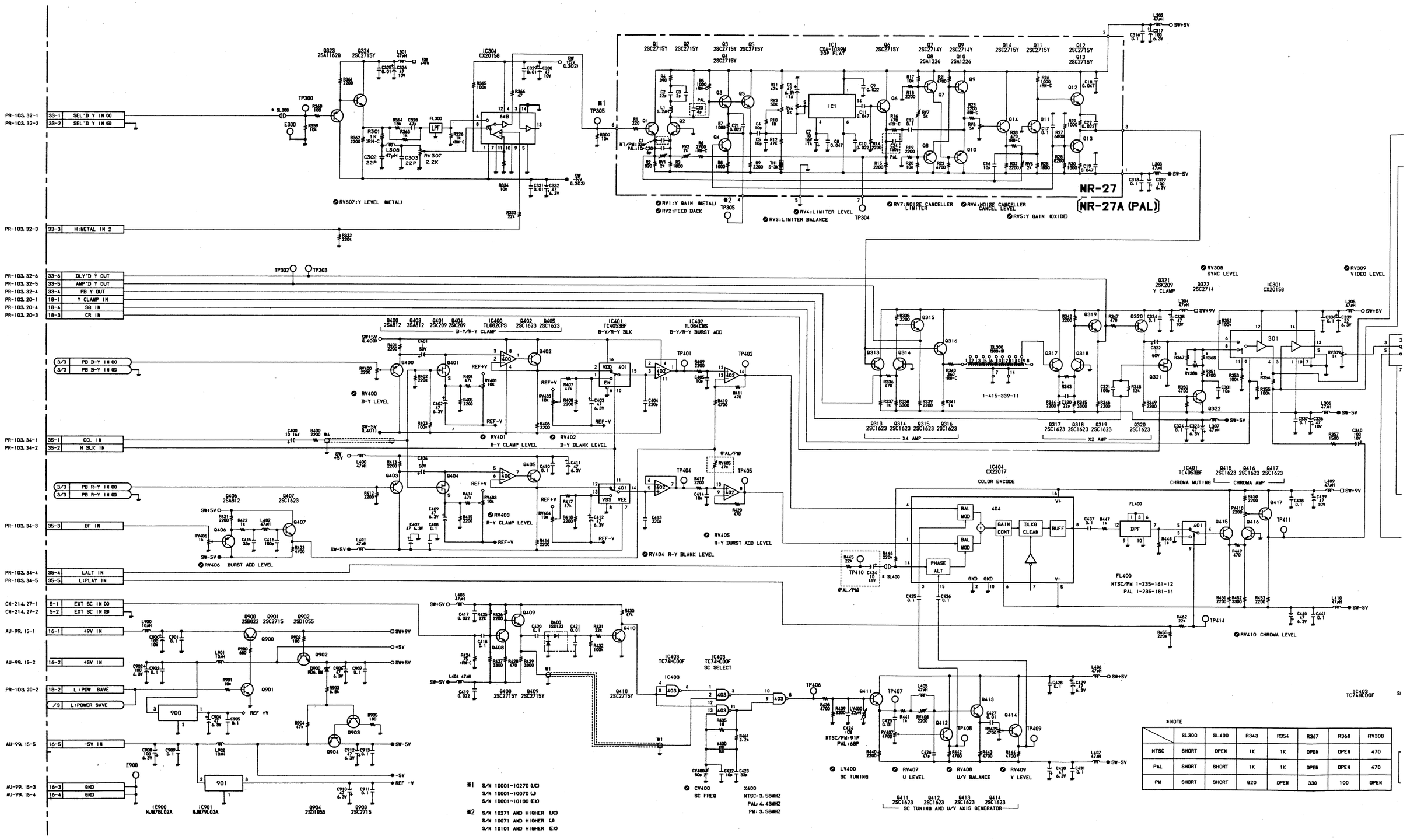


	R657	R658	R659	R817	R818
NTSC	0Ω	0Ω	0Ω	OPEN	OPEN
PAL	OPEN	0Ω	OPEN	0Ω	OPEN
PM	0Ω	OPEN	OPEN	OPEN	0Ω

PR-103/-103P(3/3)
1-623-986-14 (5)
VA-500
VA-500P

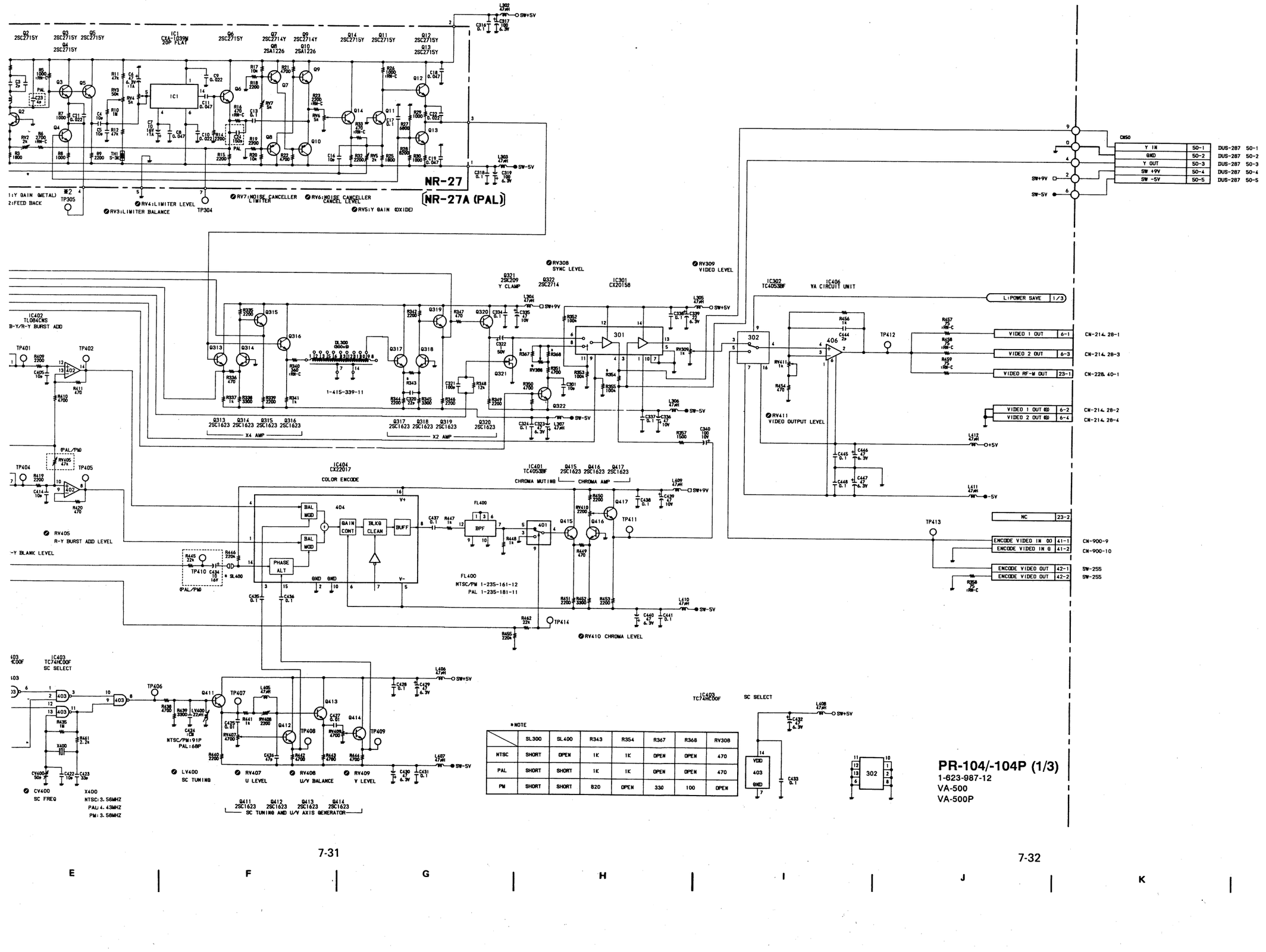
PR-104/-104P(1/3), NR-27/-27A PR-104/-1(

PR-104/-104P(1/3); CTDM EXPANDER AND CHROMA ENCODE, Y/C MIX
NR-27/-27A; NOISE REDUCTION



*NOTE

	SL300	SL400	R343	R354	R367	R368	RV308
NTSC	SHORT	OPEN	1K	1K	OPEN	OPEN	470
PAL	SHORT	SHORT	1K	1K	OPEN	OPEN	470
PM	SHORT	SHORT	820	OPEN	330	100	OPEN



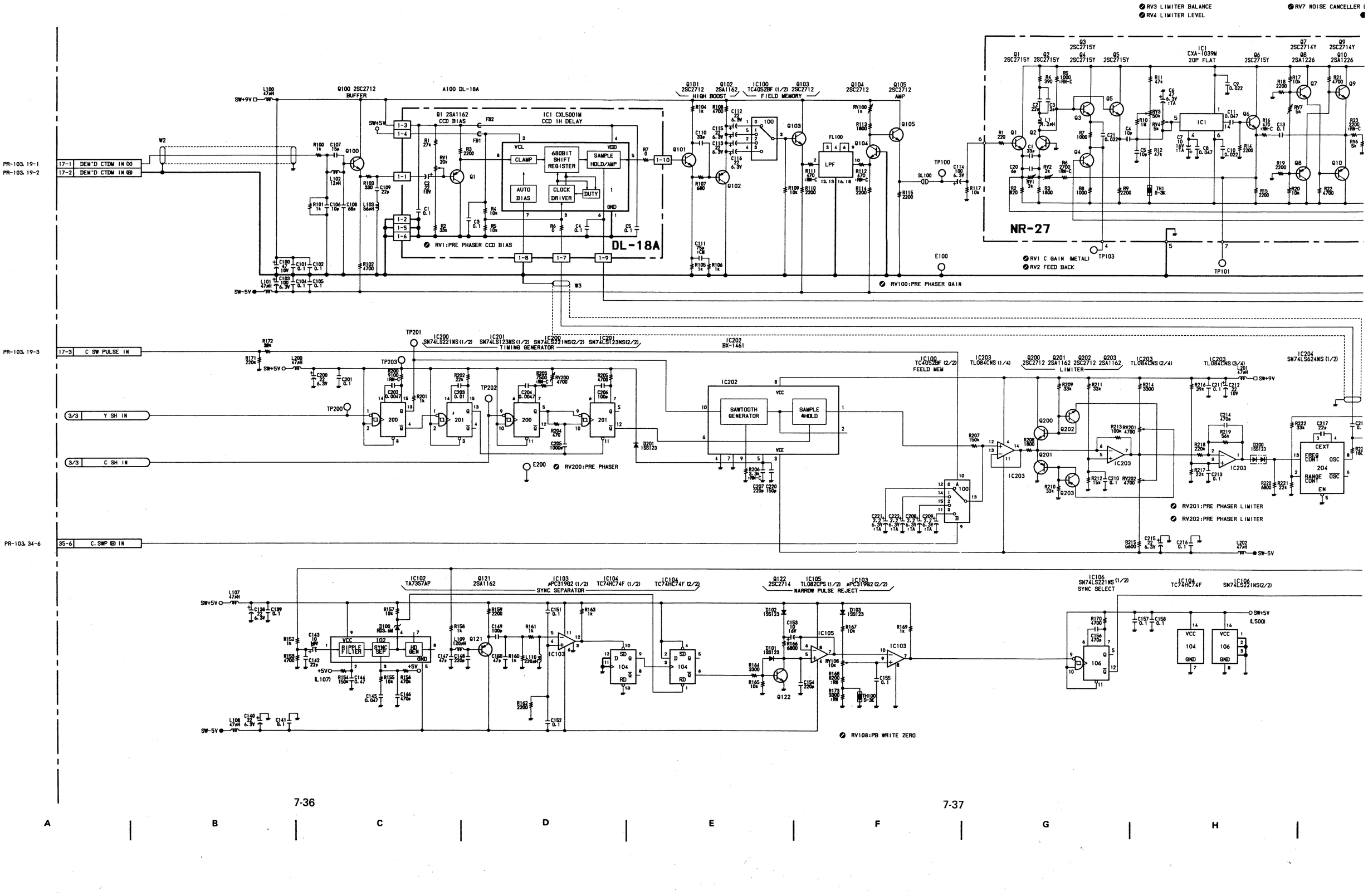
*NOTE

	SL300	SL400	R343	R354	R367	R368	RV308
NTSC	SHORT	OPEN	1K	1K	OPEN	OPEN	470
PAL	SHORT	SHORT	1K	1K	OPEN	OPEN	470
PM	SHORT	SHORT	820	OPEN	330	100	OPEN

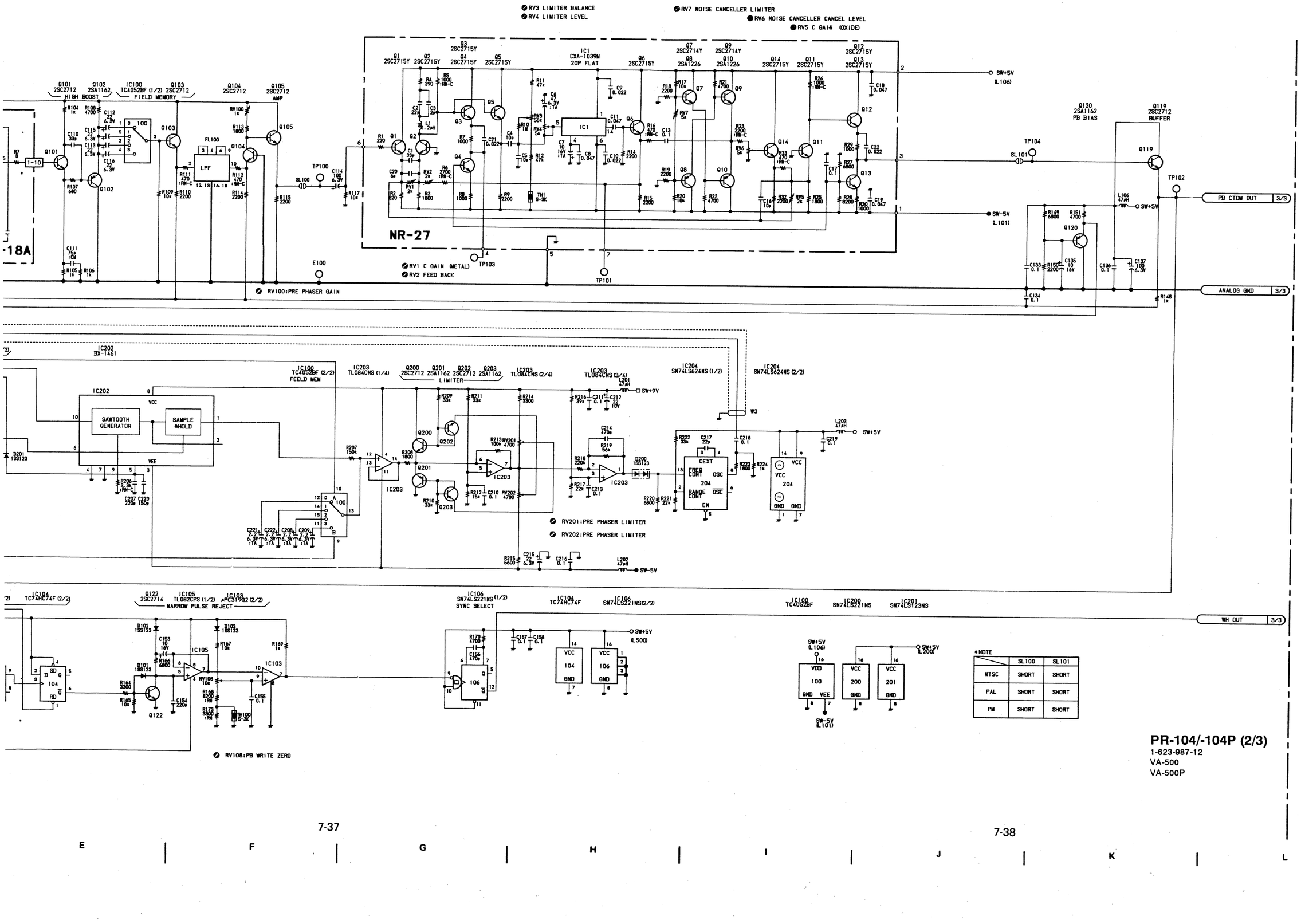
PR-104/-104P (1/3)
1-623-987-12
VA-500
VA-500P

PR-104/-104P(2/3), DL-18A, NR-27/-27A

PR-104/-104P(2/3); CTDM EXPANDER AND CHROMA ENCODE, Y/C MIX
DL-18A; CHROMA 1H DELAY LINE
NR-27/-27A; NOISE REDUCTION



PR-104/-104P(2/3), DL-18A, NR-27/-27A

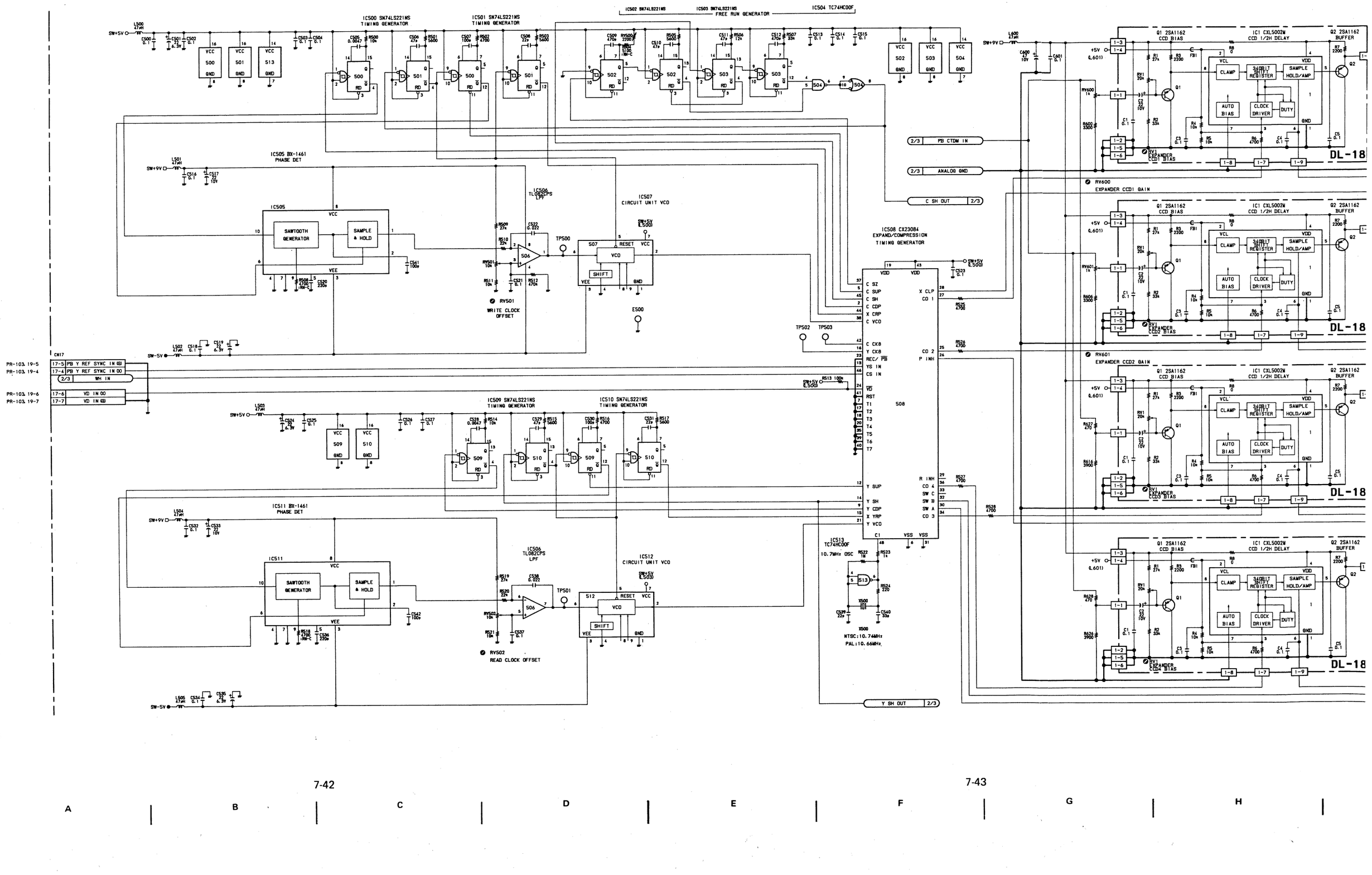


*NOTE	SL100	SL101
NTSC	SHORT	SHORT
PAL	SHORT	SHORT
PM	SHORT	SHORT

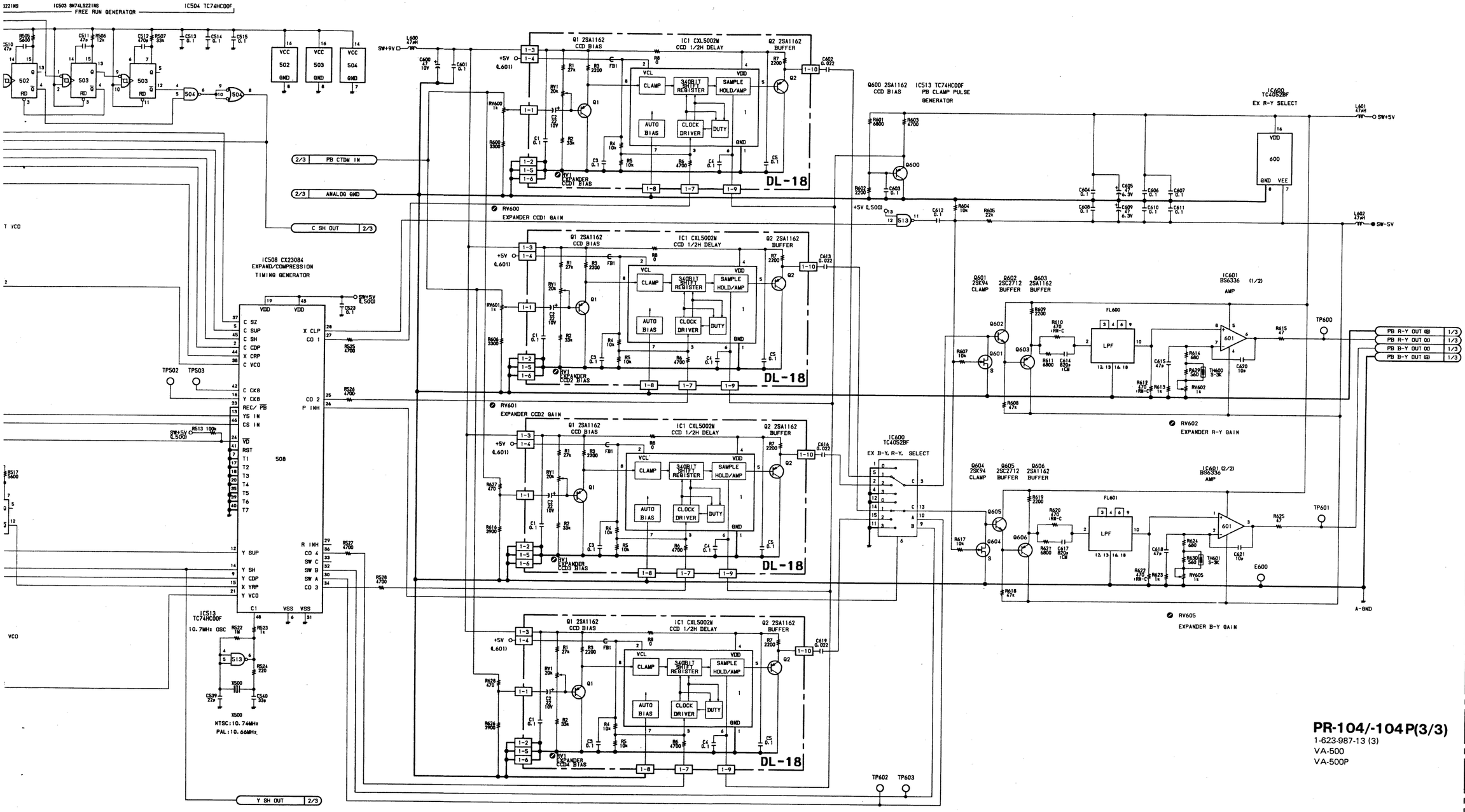
PR-104/-104P (2/3)
1-623-987-12
VA-500
VA-500P

PR-104/-104P(3/3), DL-18 PR-104/-

PR-104/-104P(3/3); CTDM EXPANDER AND CHROMA ENCODE, Y/C MIX
DL-18; CHROMA 1/2H DELAY LINE

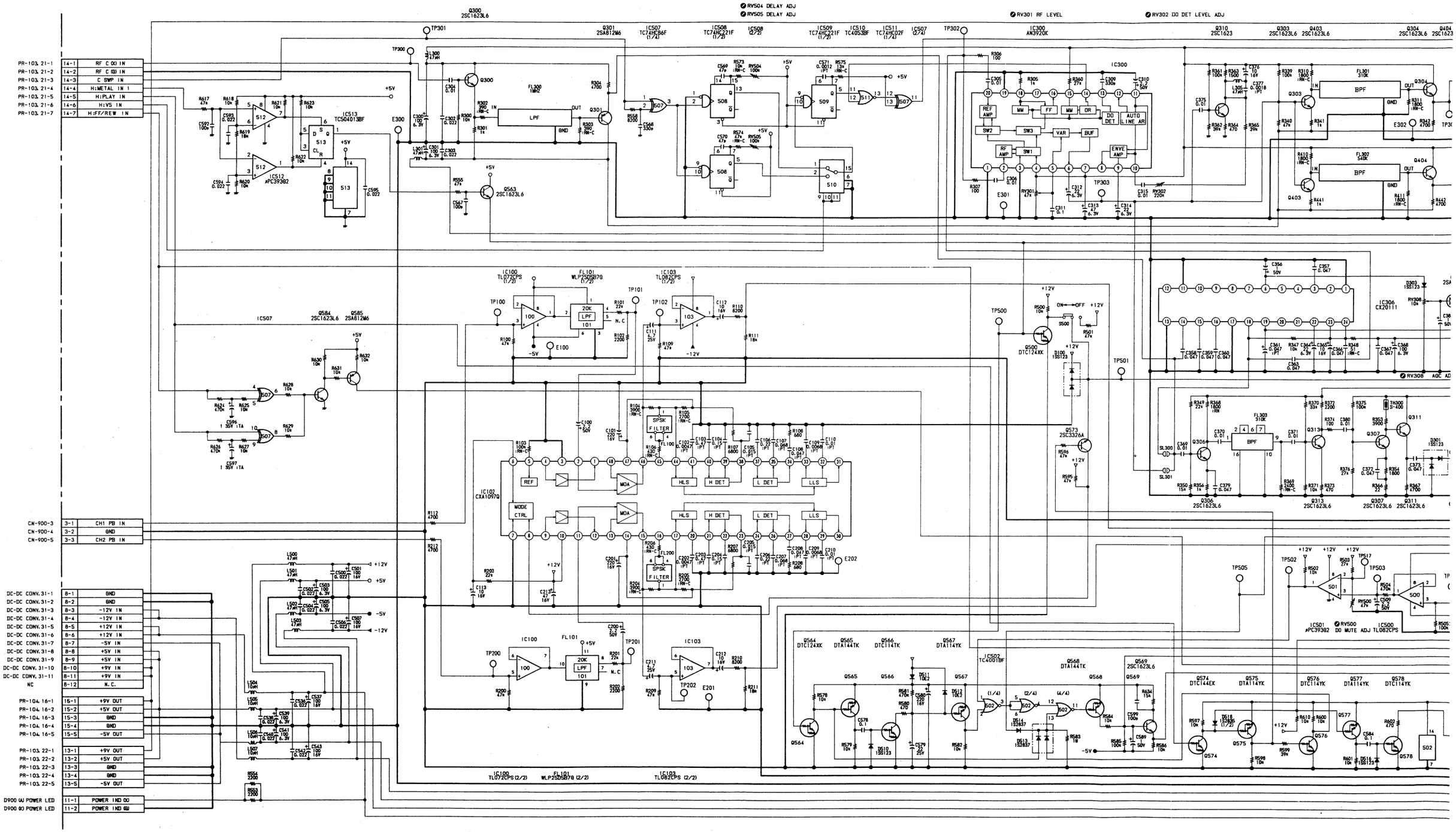


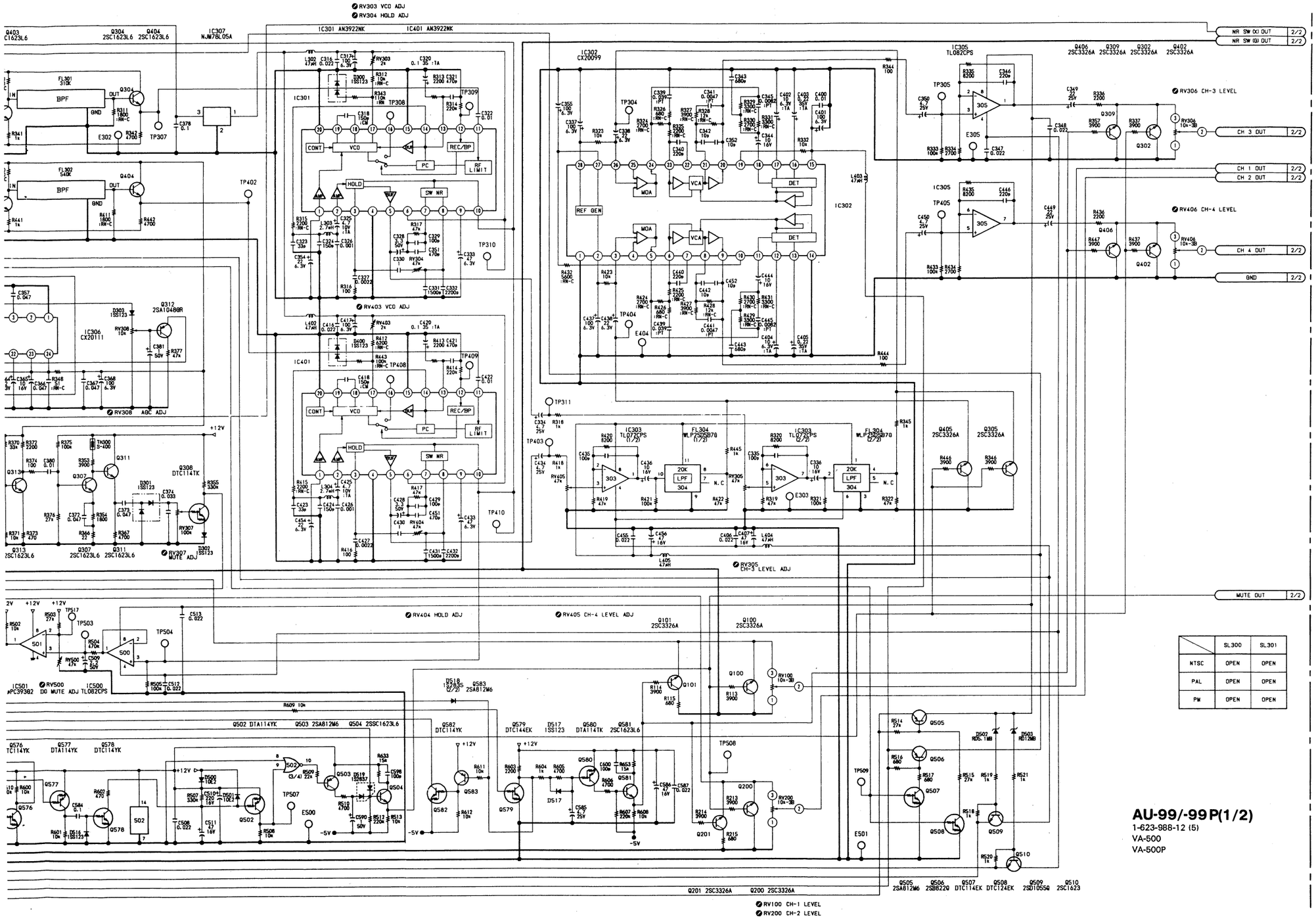
PR-104/-104P(3/3), DL-18



PR-104/-104P(3/3)
1-623-987-13 (3)
VA-500
VA-500P

AU-99/-99P(1/2); AUDIO SYSTEM

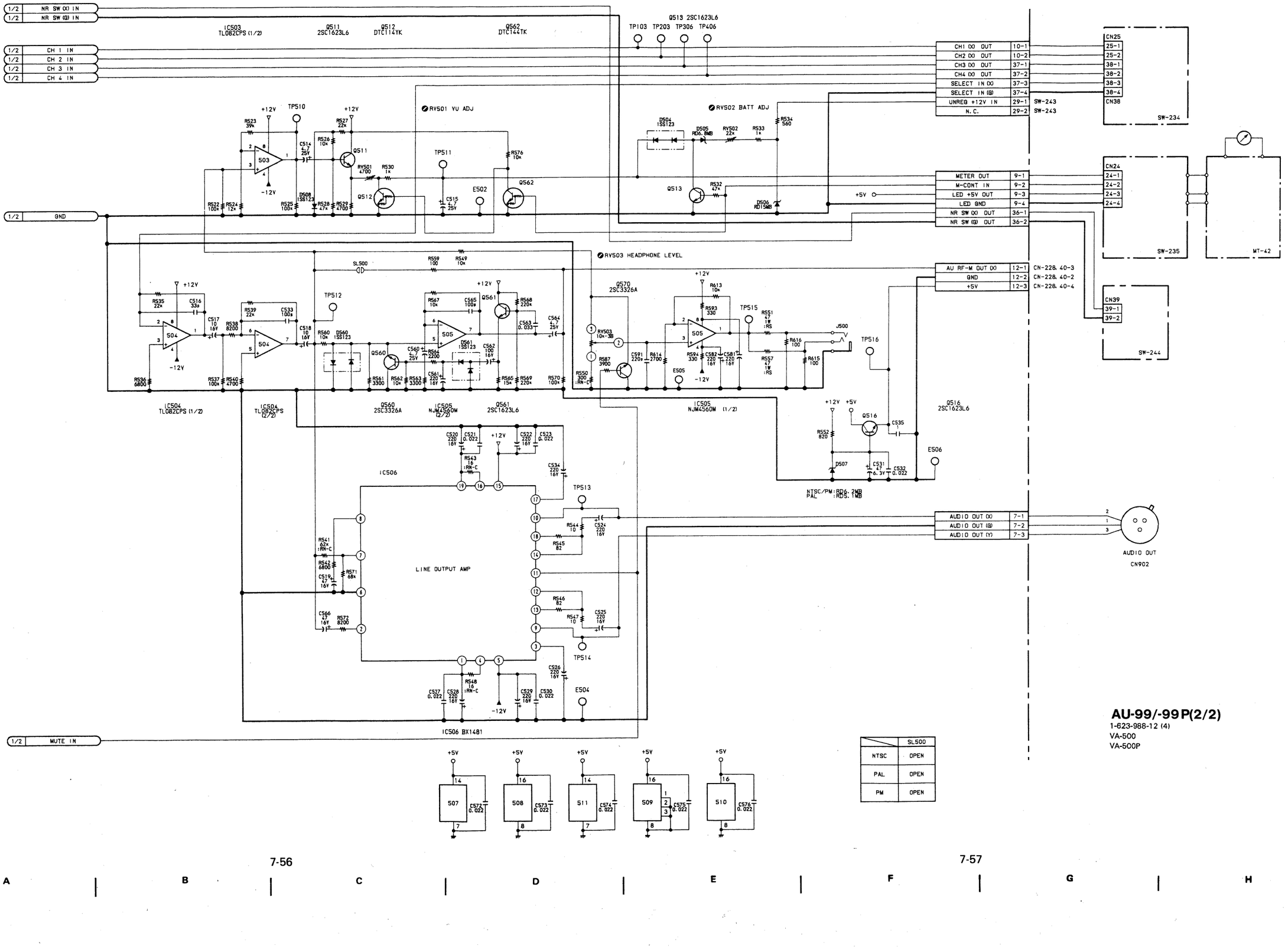




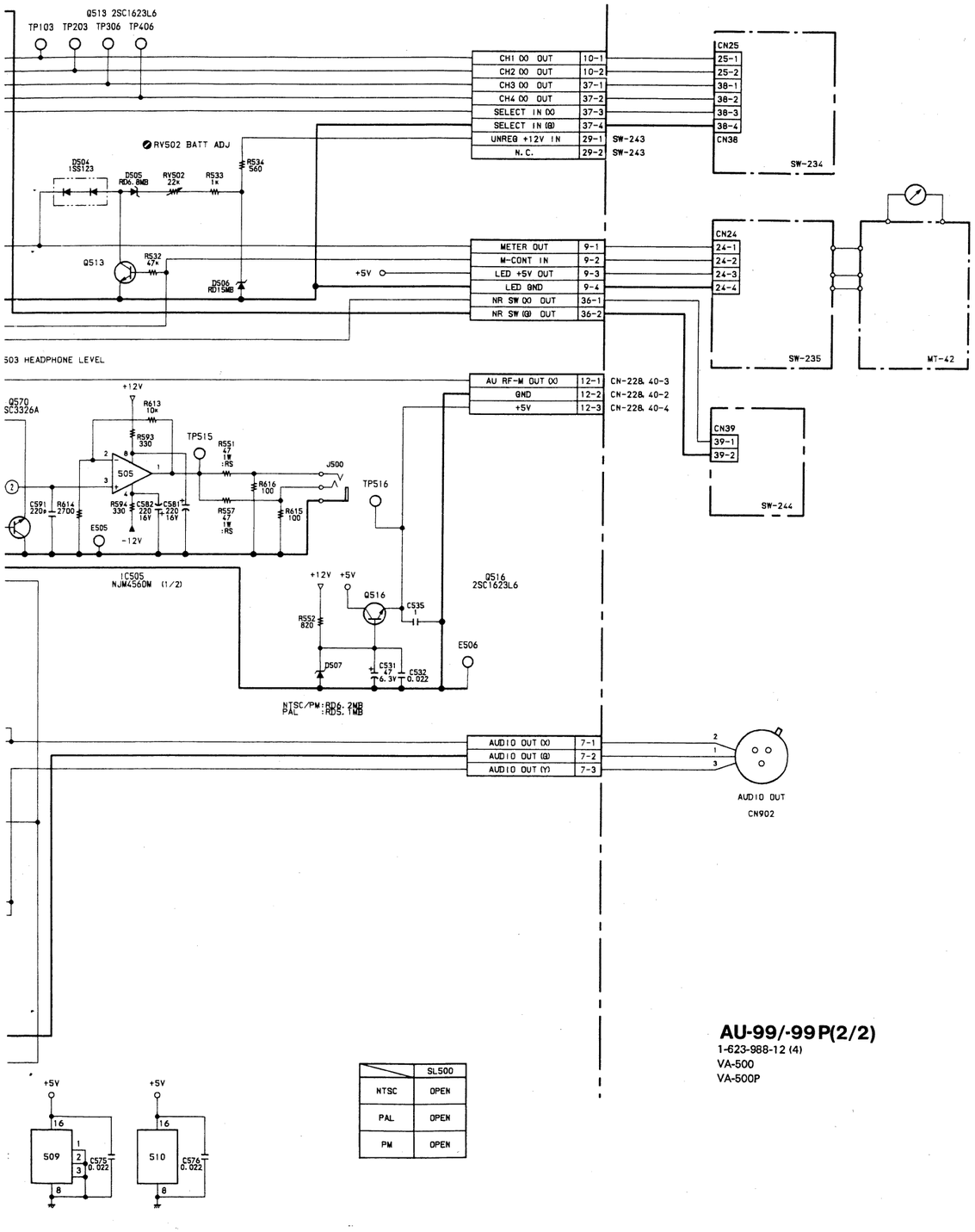
	SL300	SL301
NTSC	OPEN	OPEN
PAL	OPEN	OPEN
PM	OPEN	OPEN

AU-99/-99P(1/2)
1-623-988-12 (5)
VA-500
VA-500P

AU-99/-99P(2/2); AUDIO SYSTEM

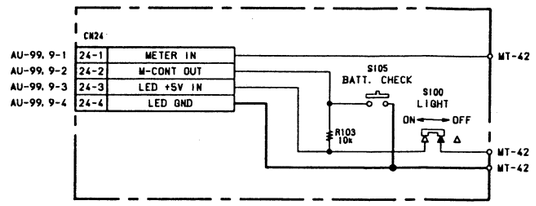


AU-99/-99P(2/2)
1-623-988-12 (4)
VA-500
VA-500P



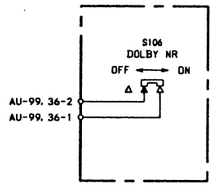
AU-99/-99P(2/2)
1-623-988-12 (4)
VA-500
VA-500P

SW-235; AUDIO MIX SWITCH



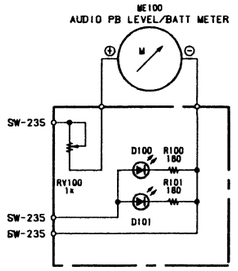
SW-235
1-623-806-11 (1)
VA-500
VA-500P

SW-244; DOLBY ON/OFF SWITCH



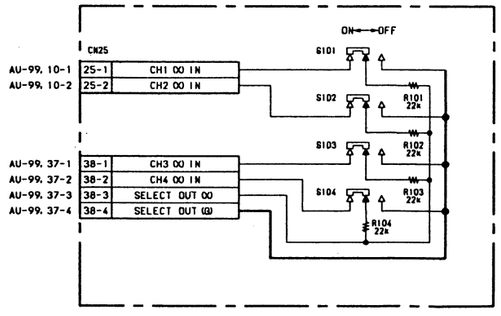
SW-244
1-623-803-11 (1)
VA-500
VA-500P

MT-42; AUDIO MIX METER



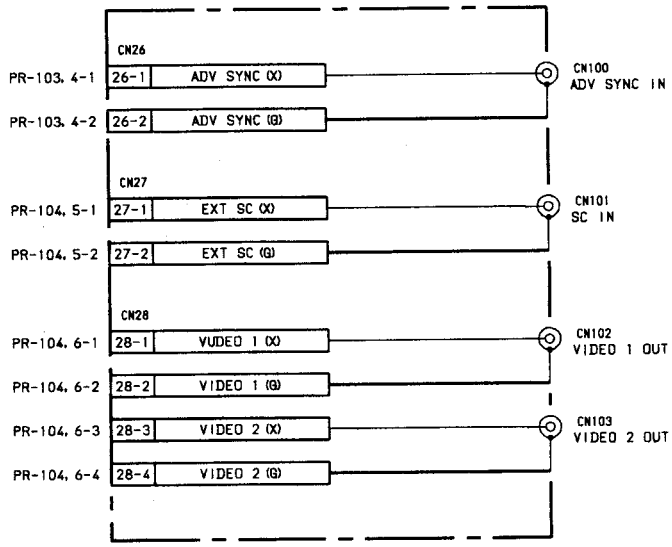
MT-42
1-623-805-12 (1)
VA-500
VA-500P

SW-234; AUDIO MONITOR SELECT SWITCH



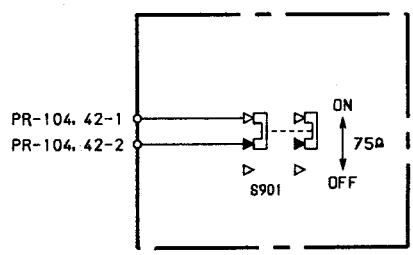
SW-234
1-623-802-11 (1)
VA-500
VA-500P

CN-214; BNC RELAY BOARD



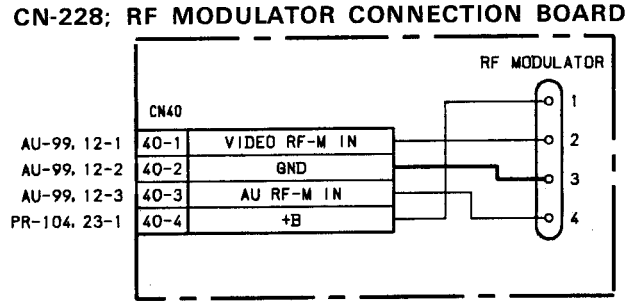
CN-214
1-623-990-11 (1)
VA-500
VA-500P

SW-255; 75Ω TERMINATE SWITCH



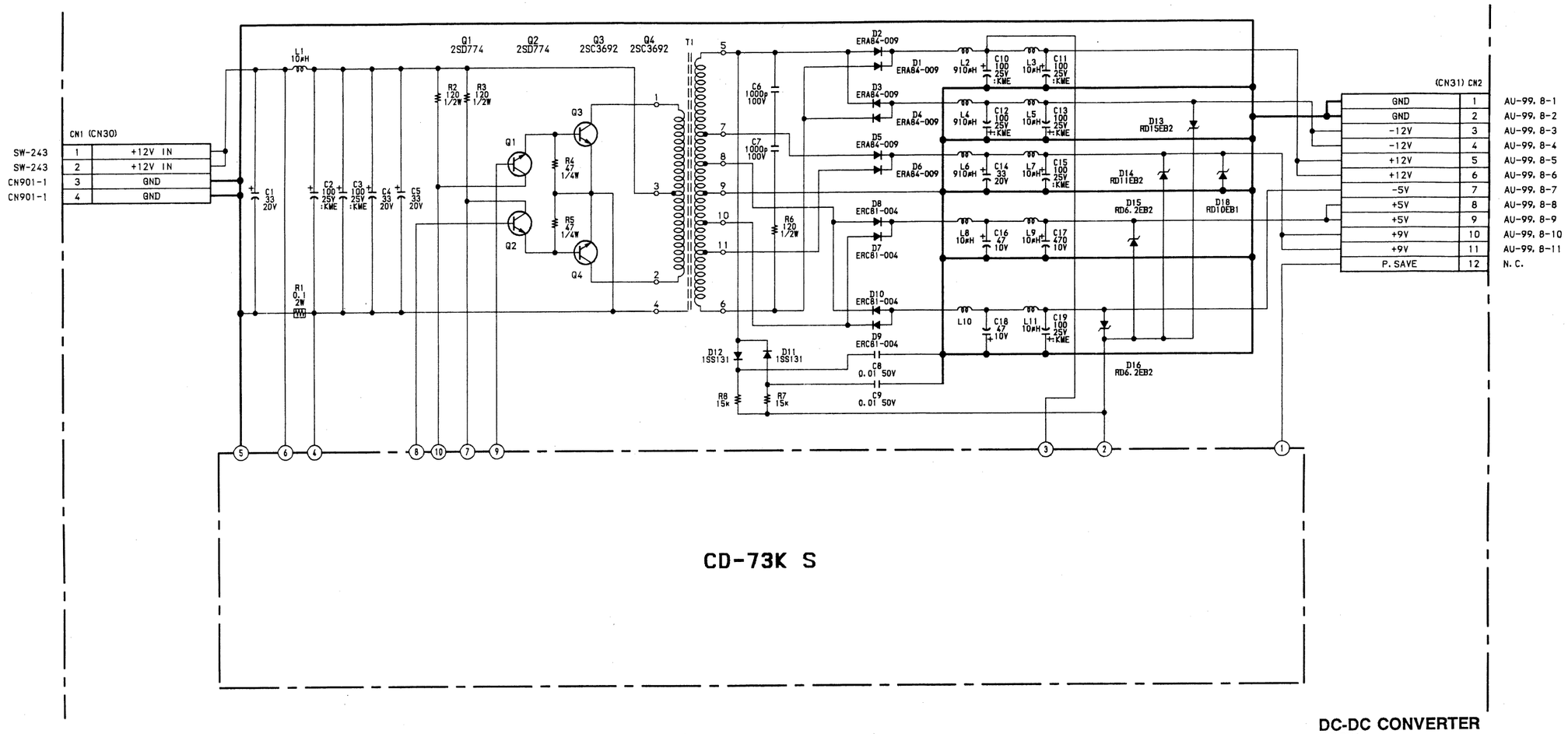
SW-255
1-623-989-11 (1)
VA-500
VA-500P

CN-228; RF MODULATOR CONNECTION BOARD

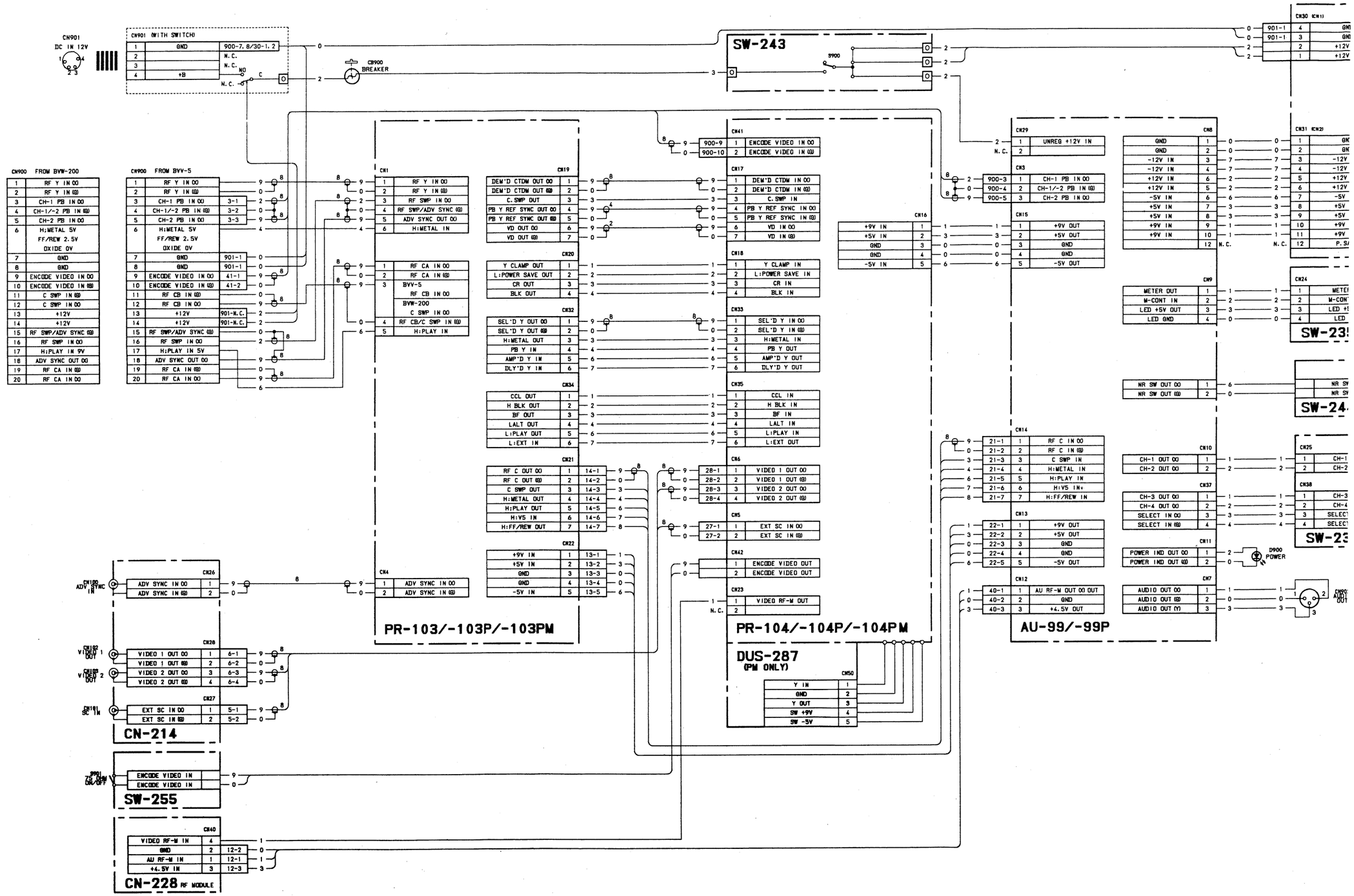


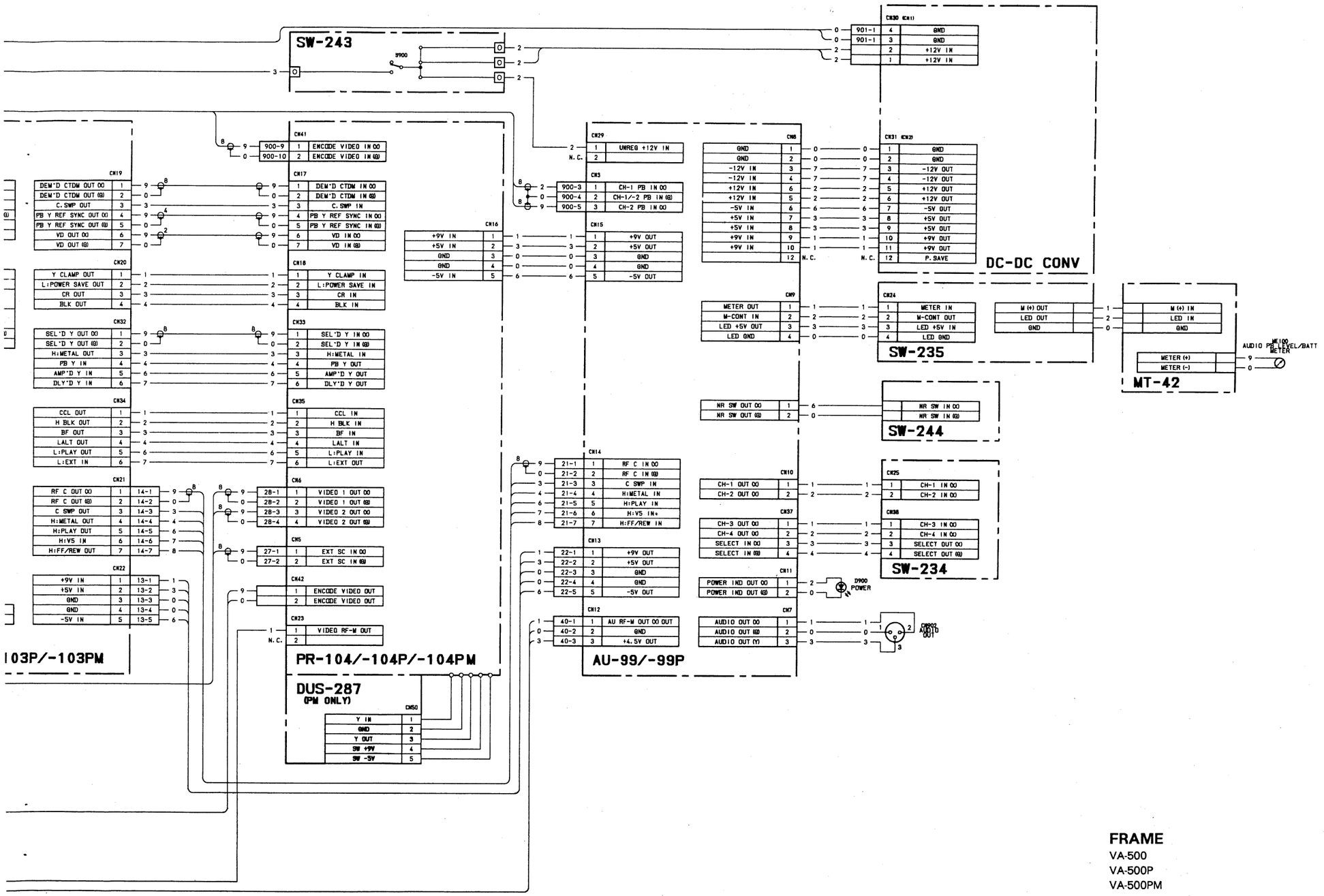
CN-228
1-623-801-11 (1)
VA-500
VA-500P

DC-DC CONV.; DC-DC CONVERTER



DC-DC CONVERTER
(CD-73K)
VA-500
VA-500P


CN901
DC IN 12V
CN901 (WITH SWITCH)
1 GND 900-7, 8/30-1, 2
2 N.C.
3 N.C.
4 +B NO C N.C.
CB900 BREAKER
SW-243
S900
CN30 (CN1)
901-1 4 GND
901-1 3 GND
2 +12V
1 +12V
CN900 FROM BVW-200
1 RF Y IN 00
2 RF Y IN (0)
3 CH-1 PB IN 00
4 CH-1/-2 PB IN (0)
5 CH-2 PB IN 00
6 H:METAL 5V FF/REW 2.5V OXIDE 0V
7 GND
8 GND
9 ENCODE VIDEO IN 00
10 ENCODE VIDEO IN (0)
11 C SWP IN (0)
12 C SWP IN 00
13 +12V
14 +12V
15 RF SWP/ADV SYNC (0)
16 RF SWP IN 00
17 H:PLAY IN 9V
18 ADV SYNC OUT 00
19 RF CA IN (0)
20 RF CA IN 00
CN900 FROM BVV-5
1 RF Y IN 00
2 RF Y IN (0)
3 CH-1 PB IN 00 3-1
4 CH-1/-2 PB IN (0) 3-2
5 CH-2 PB IN 00 3-3
6 H:METAL 5V FF/REW 2.5V OXIDE 0V
7 GND 901-1
8 GND 901-1
9 ENCODE VIDEO IN 00 41-1
10 ENCODE VIDEO IN (0) 41-2
11 RF CB IN (0)
12 RF CB IN 00
13 +12V 901-N.C.
14 +12V 901-N.C.
15 RF SWP/ADV SYNC (0)
16 RF SWP IN 00
17 H:PLAY IN 5V
18 ADV SYNC OUT 00
19 RF CA IN (0)
20 RF CA IN 00
CN1
1 RF Y IN 00
2 RF Y IN (0)
3 RF SWP IN 00
4 RF SWP/ADV SYNC (0)
5 ADV SYNC OUT 00
6 H:METAL IN
1 RF CA IN 00
2 RF CA IN (0)
3 BVV-5 RF CB IN 00
BVW-200 C SWP IN 00
4 RF CB/C SWP IN (0)
5 H:PLAY IN
CN19
DEM'D CTDM OUT 00
DEM'D CTDM OUT (0)
C. SWP OUT
PB Y REF SYNC OUT 00
PB Y REF SYNC OUT (0)
VD OUT 00
VD OUT (0)
CN20
Y CLAMP OUT
L:POWER SAVE OUT
CR OUT
BLK OUT
CN32
SEL'D Y OUT 00
SEL'D Y OUT (0)
H:METAL OUT
PB Y IN
AMP'D Y IN
DLY'D Y IN
CN34
CCL OUT
H BLK OUT
BF OUT
LALT OUT
L:PLAY OUT
L:EXT IN
CN21
RF C OUT 00 14-1
RF C OUT (0) 14-2
C SWP OUT 14-3
H:METAL OUT 14-4
H:PLAY OUT 14-5
H:V5 IN 14-6
H:FF/REW OUT 14-7
CN22
+9V IN 13-1
+5V IN 13-2
GND 13-3
GND 13-4
-5V IN 13-5
CN4
1 ADV SYNC IN 00
2 ADV SYNC IN (0)
PR-103/-103P/-103PM
900-9 ENCODE VIDEO IN 00
900-10 ENCODE VIDEO IN (0)
CN41
1 ENCODE VIDEO IN 00
2 ENCODE VIDEO IN (0)
CN17
1 DEM'D CTDM IN 00
2 DEM'D CTDM IN (0)
3 C. SWP IN
4 PB Y REF SYNC IN 00
5 PB Y REF SYNC IN (0)
6 VD IN 00
7 VD IN (0)
CN18
1 Y CLAMP IN
2 L:POWER SAVE IN
3 CR IN
4 BLK IN
CN33
1 SEL'D Y IN 00
2 SEL'D Y IN (0)
3 H:METAL IN
4 PB Y OUT
5 AMP'D Y OUT
6 DLY'D Y OUT
CN35
1 CCL IN
2 H BLK IN
3 BF IN
4 LALT IN
5 L:PLAY IN
6 L:EXT OUT
CN6
28-1 1 VIDEO 1 OUT 00
28-2 2 VIDEO 1 OUT (0)
28-3 3 VIDEO 2 OUT 00
28-4 4 VIDEO 2 OUT (0)
CN5
27-1 1 EXT SC IN 00
27-2 2 EXT SC IN (0)
CN42
1 ENCODE VIDEO OUT
2 ENCODE VIDEO OUT
CN23
1 VIDEO RF-M OUT
2 N.C.
PR-104/-104P/-104PM
CN16
+9V IN 1
+5V IN 2
GND 3
GND 4
-5V IN 5
CN29
1 UNREG +12V IN
2 N.C.
CN3
900-3 1 CH-1 PB IN 00
900-4 2 CH-1/-2 PB IN (0)
900-5 3 CH-2 PB IN 00
CN15
1 +9V OUT
2 +5V OUT
3 GND
4 GND
5 -5V OUT
CN8
GND 1
GND 2
-12V IN 3
-12V IN 4
+12V IN 6
+12V IN 5
-5V IN 6
+5V IN 7
+5V IN 8
+9V IN 9
+9V IN 10
11
N.C. 12
CN31 (CN2)
CN9
METER OUT 1
M-CONT IN 2
LED +5V OUT 3
LED GND 4
SW-23
NR SW OUT 00 1
NR SW OUT (0) 2
SW-24
CN14
21-1 1 RF C IN 00
21-2 2 RF C IN (0)
21-3 3 C SWP IN
21-4 4 H:METAL IN
21-5 5 H:PLAY IN
21-6 6 H:V5 IN
21-7 7 H:FF/REW IN
CN13
22-1 1 +9V OUT
22-2 2 +5V OUT
22-3 3 GND
22-4 4 GND
22-5 5 -5V OUT
CN12
40-1 1 AU RF-M OUT 00 OUT
40-2 2 GND
40-3 3 +4.5V OUT
AU-99/-99P
CN10
CH-1 OUT 00 1
CH-2 OUT 00 2
CN37
CH-3 OUT 00 1
CH-4 OUT 00 2
SELECT IN 00 3
SELECT IN (0) 4
CN11
POWER IND OUT 00 1
POWER IND OUT (0) 2
D900 POWER
CN7
AUDIO OUT 00 1
AUDIO OUT (0) 2
AUDIO OUT (Y) 3
CN25
CN38
SW-23
DUS-287 (PM ONLY)
CN50
Y IN 1
GND 2
Y OUT 3
SW +9V 4
SW -5V 5
CN26
ADV SYNC IN 00 1
ADV SYNC IN (0) 2
CN28
VIDEO 1 OUT 00 1 6-1
VIDEO 1 OUT (0) 2 6-2
VIDEO 2 OUT 00 3 6-3
VIDEO 2 OUT (0) 4 6-4
CN27
EXT SC IN 00 1 5-1
EXT SC IN (0) 2 5-2
CN-214
ENCODE VIDEO IN
ENCODE VIDEO IN
SW-255
CN40
VIDEO RF-M IN 4
GND 2 12-2
AU RF-M IN 1 12-1
+4.5V IN 3 12-3
CN-228 RF MODULE



FRAME
VA-500
VA-500P
VA-500PM

SECTION 8
PRINTED CIRCUIT BOARDS

The circuit information is provided below.

System	Board	Circuit function
VIDEO	PR-103/P	Video RF Demodulator
	DL-19	CCD 1H Delay Line
	DM-64	Limiter
	DUS-194	Switch (For PAL)
	EQ-21	Phase Equalizer
	EQ-21A	Phase Equalizer
	FL-67	Frequency Compensator (For PAL)
	FM-13	Field Memory
	PA-72	RF Amp
	PA-72A	RF Amp
	TG-37	Timing Generator
	VA-69	Video Amp and Switcher
	PR-104/P	CTDM Expander and Chroma Encode, Y/C Mix
	DL-18	Chroma 1/2H Delay Line
	DL-18A	Chroma 1H Delay Line
	NR-27/A	Noise Reduction
AUDIO	AU-99/P	Audio System
OTHERS	CN-214	BNC Relay Board
	CN-228	RF Modulator Connection Board
	MT-42	Audio Mix Meter
	SW-234	Audio Monitor Select Switch
	SW-235	Audio Mix Switch
	SW-243	Power Switch Control
	SW-244	DOLBY ON/OFF Switch
	SW-255	75 ohm Terminate Switch
	DC-DC CONV.	DC-DC Converter

PR-103/-103P, DL-19, DM-64, DUS-194, EQ-21/A, FL-67, FM-13, PA-72/A, TG-37, VA-69

PR-103/-103P 1-623-986-14

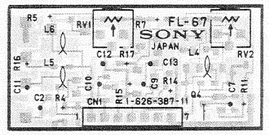
CN1	B - 1C	IC110	B - 7C	Q109	F - 7S	RV102	C - 7C	TP203	I - 4C
	B - 1S	IC200	C - 2C	Q110	G - 7S		C - 7S		I - 4S
CN2	C - 1C	IC201	C - 3C	Q112	G - 6S	RV103	H - 7C	TP204	F - 1C
	C - 1S	IC202	D - 3C	Q113	H - 6S		H - 7S		F - 1S
CN4	E - 1C	IC203	C - 3C	Q114	I - 6S	RV104	H - 6C	TP205	I - 1C
	E - 1S	IC204	E - 4C	Q115	A - 5S		H - 6S		I - 1S
CN19	H - 1C		E - 4S	Q116	B - 5S	RV106	B - 5C	TP206	C - 3C
	H - 1S	IC208	E - 3C	Q117	A - 5S		B - 5S		C - 3S
CN20	E - 1S		E - 3S	Q118	A - 5S	RV108	B - 6C	TP207	F - 2C
	F - 1C	IC209	F - 3C	Q119	A - 5S		B - 6S		F - 2S
CN21	G - 1C		F - 3S	Q120	A - 6S	RV200	D - 2C	TP300	I - 7C
	G - 1S	IC210	F - 3C	Q121	B - 6S		D - 2S		I - 7S
CN22	D - 1C	IC211	E - 2C	Q122	B - 6S	RV201	D - 4C	TP307	I - 5C
	D - 1S	IC212	F - 2C	Q123	C - 7S		D - 4S		I - 5S
CN32	I - 1C	IC214	A - 2C	Q124	C - 7S	RV202	G - 2C	TP308	I - 4C
	I - 1S	IC215	B - 2C	Q203	C - 3S		G - 2S		I - 4S
CN34	F - 1C	IC216	A - 2C	Q205	H - 3S	RV203	F - 2C	TP309	I - 1C
	F - 1S	IC217	B - 3C	Q206	H - 3S		F - 2S		I - 1S
CN100	A - 7C		B - 3S	Q207	G - 3S	RV204	F - 2C	TP600	H - 5C
	A - 7S	IC218	A - 3C	Q208	H - 3S		F - 2S		H - 5S
			A - 3S	Q209	H - 4S	RV206	F - 2C	TP601	E - 5C
D201	D - 4C	IC303	I - 5C	Q210	H - 2S		F - 2S		E - 5S
D300	H - 4S	IC304	I - 4C	Q211	H - 2S	RV300	H - 2C	TP602	D - 4C
D600	G - 5S	IC305	I - 3C	Q212	H - 3S		H - 2S		D - 4S
D601	F - 5S	IC306	I - 2C	Q213	G - 2C	RV308	I - 6C	TP603	C - 4C
D602	C - 4S	IC600	H - 5C	Q214	G - 1S		I - 6S		C - 4S
D604	C - 4S		H - 5S	Q216	E - 3S	RV309	I - 5C	TP604	C - 5C
D605	F - 5S	IC601	G - 5C	Q217	F - 3S		I - 5S		C - 5S
D606	D - 4S	IC602	G - 5C	Q218	F - 3S	RV310	I - 4C	TP605	F - 4C
D800	D - 6S	IC603	F - 5C	Q219	F - 3S		I - 4S		F - 4S
D801	C - 6C	IC604	E - 5C	Q220	F - 3S	RV600	E - 5C	TP606	D - 5C
D900	E - 1S	IC605	H - 5C	Q221	F - 3C		E - 5S		D - 5S
			H - 5S	Q222	E - 3C	RV601	E - 5C	TP800	C - 6C
E100	B - 3C	IC606	G - 5C	Q223	E - 3S		E - 5S		C - 6S
	B - 3S	IC607	F - 5C	Q224	E - 4C	RV800	D - 6C		
E101	I - 7C	IC608	F - 5C	Q300	I - 2S		D - 6S	X600	B - 5C
	I - 7S	IC609	E - 5C	Q301	H - 2C				
E200	C - 1C	IC610	C - 5C	Q302	H - 1S	TP100	A - 4C		
	C - 1S	IC611	C - 5C	Q303	G - 4S		A - 4S		
E201	I - 1C	IC612	D - 4C	Q304	H - 4S	TP101	A - 5C		
	I - 1S		D - 4S	Q306	I - 6S		A - 5S		
E600	D - 5C	IC613	C - 4C	Q307	I - 5S	TP102	D - 7C		
	D - 5S	IC614	C - 4C	Q308	I - 4S		D - 7S		
E900	D - 1C	IC615	C - 4C	Q309	I - 4S	TP103	F - 7C		
	D - 1S	IC656	D - 5C	Q310	I - 1S		F - 7S		
		IC800	D - 5C	Q600	G - 6S	TP104	H - 7C		
FL100	F - 6C	IC801	D - 6C	Q601	E - 5S		H - 7S		
	F - 6S		D - 6S	Q602	C - 5S	TP105	1 - 7C		
FL200	H - 3C	IC802	C - 6C	Q603	C - 5S		1 - 7S		
	H - 3S	IC803	C - 6C	Q605	C - 5S	TP106	B - 4C		
FL300	H - 2C			Q606	D - 5S		B - 4S		
	H - 2S	LV800	B - 6C	Q800	B - 5S	TP107	B - 6S		
				Q801	C - 5S		C - 6C		
IC100	A - 4C	Q100	A - 4S	Q900	D - 2C	TP108	B - 3C		
IC101	D - 7C	Q101	C - 7S		D - 2S		B - 3S		
	D - 7S	Q103	D - 7S	Q901	D - 2C	TP200	D - 3C		
IC104	B - 1C	Q105	F - 7S	Q902	D - 2C		D - 3S		
IC105	B - 2C	Q106	E - 7S		D - 2S	TP201	F - 3C		
IC107	B - 4C	Q107	E - 7S	Q903	E - 1C		F - 3S		
	B - 4S	Q108	F - 7S	Q904	E - 1C	TP202	E - 4C		
IC108	A - 5C				E - 1S		E - 4S		
	A - 5S								
IC109	A - 5C								

C; COMPONENT SIDE
S; SOLDERING SIDE

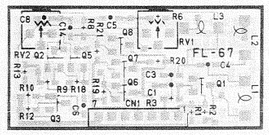
PR-103/-103P; VIDEO RF DEMODULATOR

DL-19; CCD 1H DELAY LINE
DM-64; LIMITER
DUS-194; SWITCH
EQ-21/A; PHASE EQUALIZER
FL-67; FILTER
FM-13; FIELD MEMORY
PA-72/A; RF AMP
TG-37; TIMING GENERATOR
VA-69; VIDEO AMP AND SWITCHER

EK : S/N Up to 10410

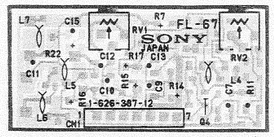


FL-67 — COMPONENT SIDE —
1-626-387-11 (1)
VA-500P

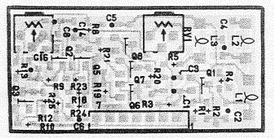


FL-67 — SOLDERING SIDE —
1-626-387-11 (1)
VA-500P

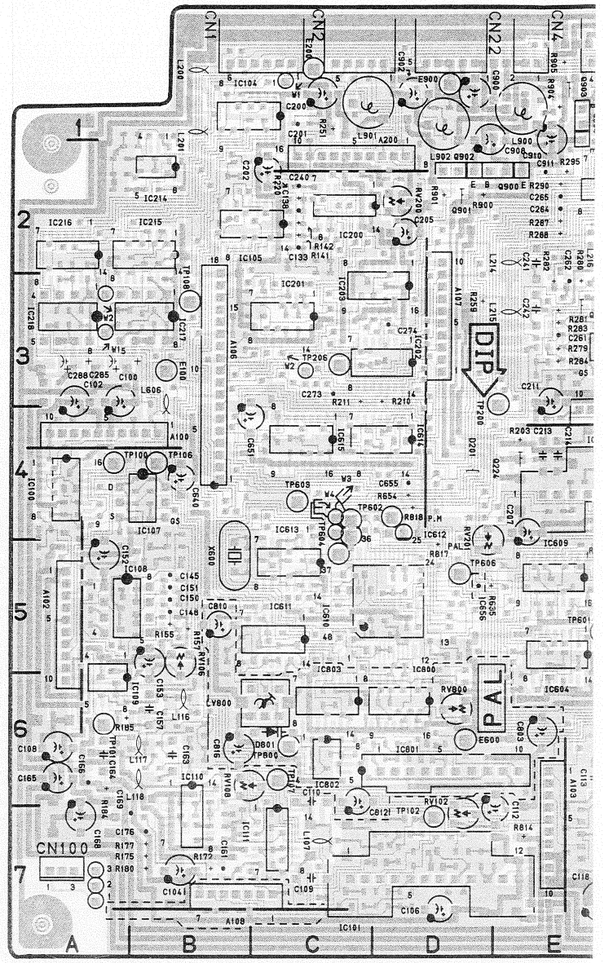
EK : S/N 10411 and Higher

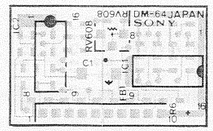


FL-67 — COMPONENT SIDE —
1-626-387-12 (1)
VA-500P

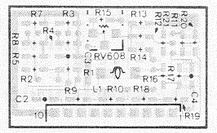


FL-67 — SOLDERING SIDE —
1-626-387-12 (1)
VA-500P



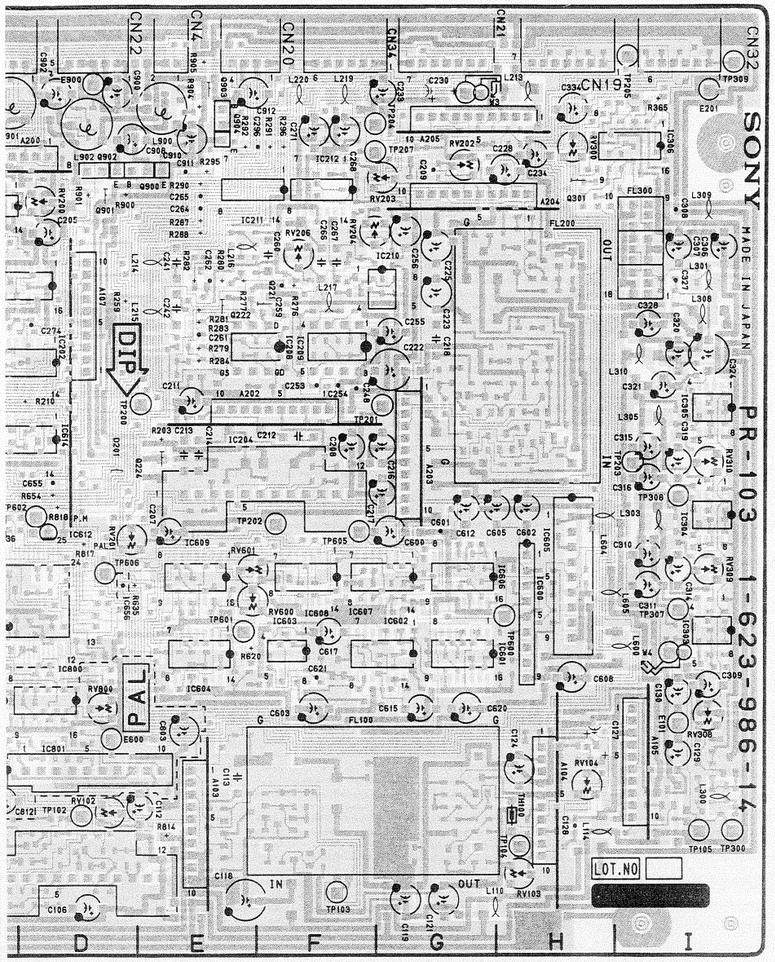


DM-64 — COMPONENT SIDE —
1-623-996-11 (1)
VA-500
VA-500P

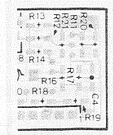


DM-64 — SOLDERING SIDE —
1-623-996-11 (1)
VA-500
VA-500P

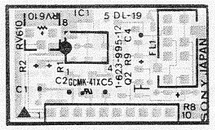
PR-103/-103P, DL-19, DM-64, DUS-194, EQ-21/A, FL-67, FM-13, PA-72/A, TG-37, VA-69



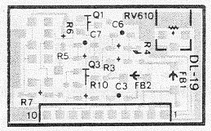
PR-103/-103P — COMPONENT SIDE —
1-623-986-14 (3)
VA-500
VA-500P



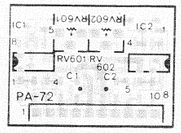
— SOLDERING SIDE —



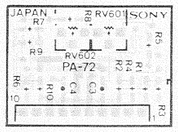
DL-19 — COMPONENT SIDE —
1-623-995-12 (2)
VA-500
VA-500P



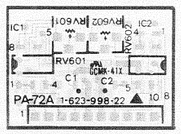
DL-19 — SOLDERING SIDE —
1-623-995-12 (2)
VA-500
VA-500P



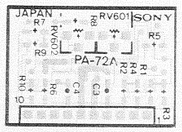
PA-72 — COMPONENT SIDE —
1-623-998-11 (1)
VA-500
VA-500P



PA-72 — SOLDERING SIDE —
1-623-998-11 (1)
VA-500
VA-500P

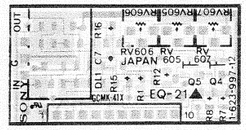


PA-72A — COMPONENT SIDE —
1-623-998-22 (2)
VA-500
VA-500P

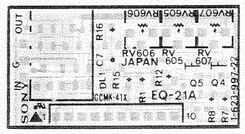


PA-72A — SOLDERING SIDE —
1-623-998-22 (2)
VA-500
VA-500P

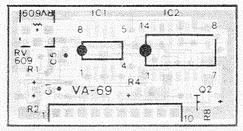
DUS-194 — COMPONENT SIDE —
1-623-599-12 (1)
VA-500P



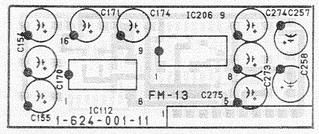
EQ-21 — COMPONENT SIDE —
1-623-997-12 (2)
VA-500
VA-500P



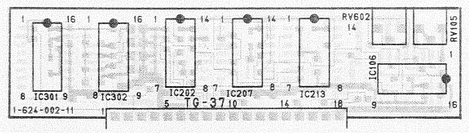
EQ-21A — COMPONENT SIDE —
1-623-997-22 (2)
VA-500
VA-500P



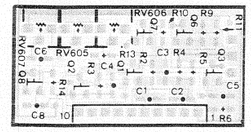
VA-69 — COMPONENT SIDE —
1-623-999-11 (1)
VA-500
VA-500P



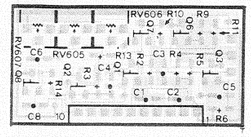
FM-13 — COMPONENT SIDE —
1-624-001-11 (1)
VA-500
VA-500P



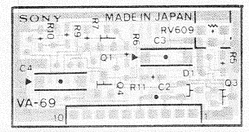
TG-37 — COMPONENT SIDE —
1-624-002-11 (1)
VA-500
VA-500P



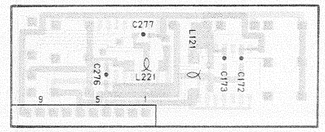
EQ-21 — SOLDERING SIDE —
1-623-997-12 (2)
VA-500
VA-500P



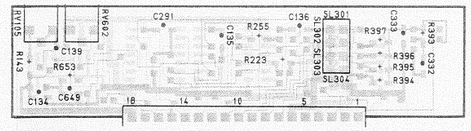
EQ-21A — SOLDERING SIDE —
1-623-997-22 (2)
VA-500
VA-500P



VA-69 — SOLDERING SIDE —
1-623-999-11 (1)
VA-500
VA-500P

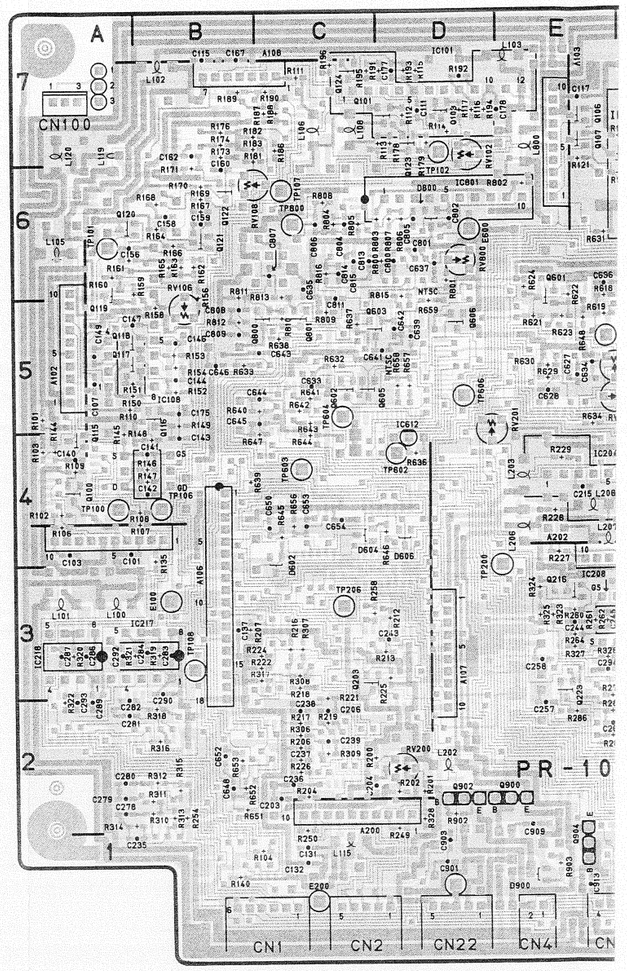


FM-13 — SOLDERING SIDE —
1-624-001-11 (1)
VA-500
VA-500P



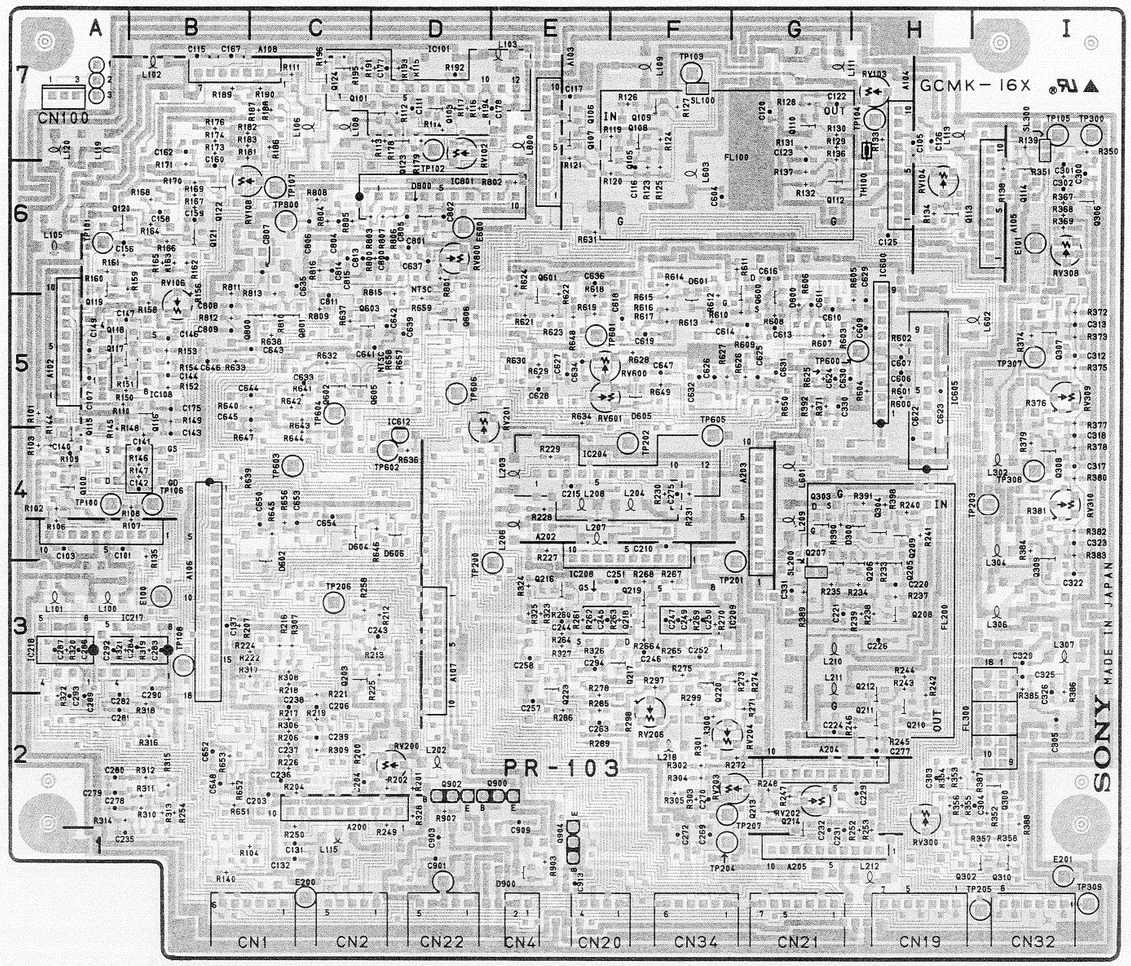
TG-37 — SOLDERING SIDE —
1-624-002-11 (1)
VA-500
VA-500P

PR-103/-103P; VIDEO RF DEMODULATOR



PR-103/-103P

PR-103/-103P; VIDEO RF DEMODULATOR



PR-103/-103P — SOLDERING SIDE —

1-623-986-14 (3)
VA-500
VA-500P

PR-104/-104P, DL-18/-18A, NR-27/-27A

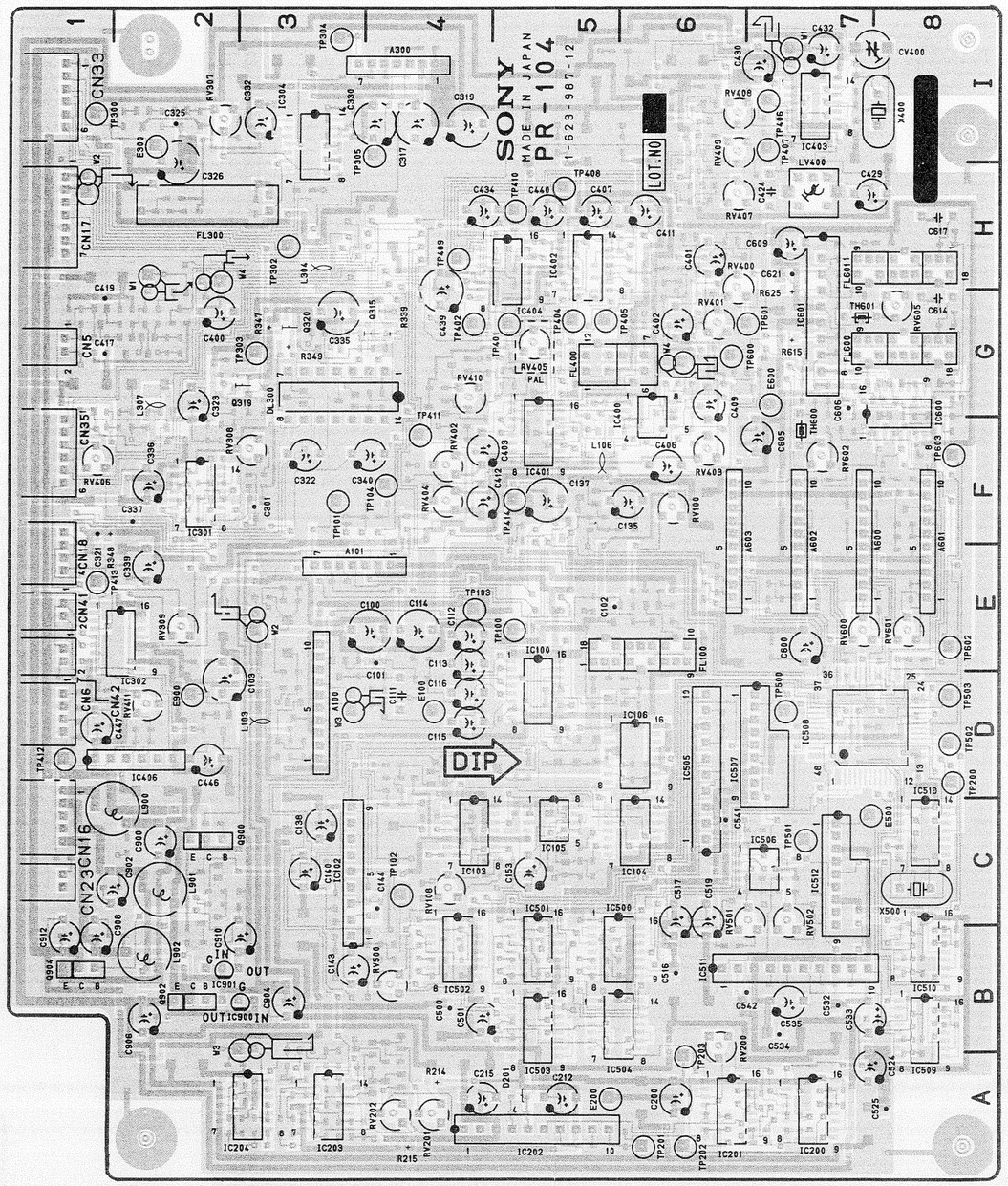
PR-104/-104P; CTDM EXPANDER AND CHROMA ENCODE, Y/C MIX
DL-18; CHROMA 1/2H DELAY LINE
DL-18A; CHROMA 1H DELAY LINE
NR-27/-27A; NOISE REDUCTION

J	: S/N Up to 10675
UC	: S/N Up to 11371
EK	: S/N Up to 11345

PR-104/-104P 1-623-987-12

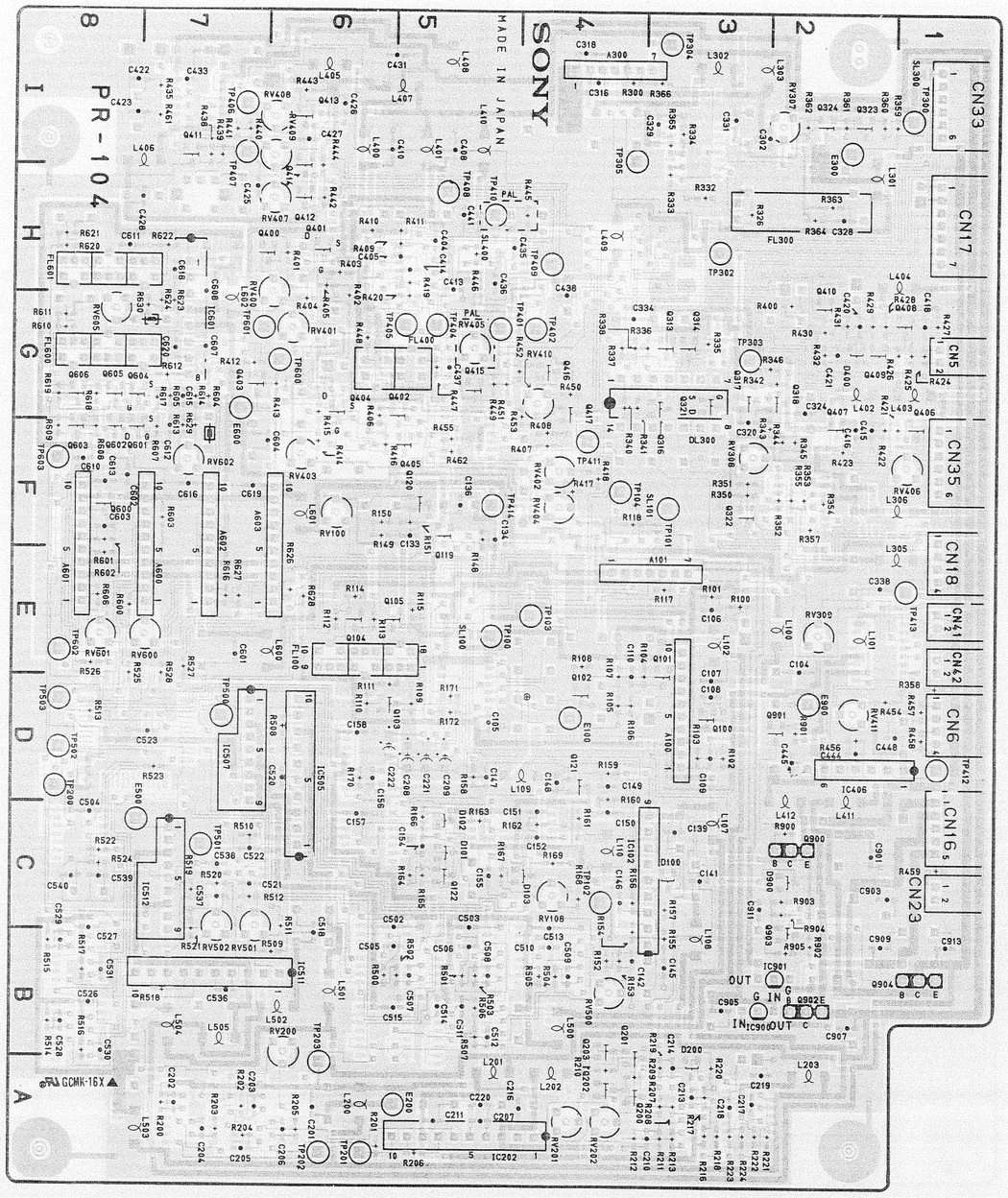
CN5	G - 1C	IC106	D - 6C	Q318	G - 2S	RV403	F - 6C	TP402	G - 4C
	G - 1S	IC200	A - 7C	Q319	G - 3C		F - 6S		G - 4S
CN6	D - 1C	IC201	A - 6C	Q320	G - 3C	RV404	F - 4C	TP404	G - 5C
	D - 1S	IC202	A - 5C	Q321	G - 3S		F - 4S		G - 5S
CN16	C - 1C		A - 5S	Q322	F - 3S	RV405	G - 5C	TP405	G - 5C
	C - 1S	IC203	A - 3C	Q323	I - 2S		G - 5S		G - 5S
CN17	H - 1C	IC204	A - 3C	Q324	I - 2S	RV406	F - 1C	TP406	I - 7C
	H - 1S	IC301	F - 2C	Q400	H - 6S		F - 1S		I - 7S
CN18	E - 1C	IC302	E - 2C	Q401	H - 6S	RV407	H - 6C	TP407	I - 7C
	E - 1S	IC304	I - 3C	Q402	G - 5S		H - 6S		I - 7S
CN23	C - 1C	IC400	G - 6C	Q403	G - 7S	RV408	I - 6C	TP408	H - 5C
	C - 1S	IC401	F - 5C	Q404	G - 6S		I - 6S		H - 5S
CN33	I - 1C	IC402	H - 5C	Q405	F - 5S	RV409	I - 6C	TP409	H - 4C
	I - 1S	IC403	I - 7C	Q406	G - 1S		I - 6S		H - 4S
CN35	F - 1C	IC404	H - 5C	Q407	G - 2S	RV410	G - 4C	TP410	H - 5C
	F - 1S	IC406	D - 2C	Q408	G - 1S		G - 4S		H - 5S
CN41	E - 1C		D - 2S	Q409	G - 2S	RV411	D - 2C	TP411	F - 4C
	E - 1S	IC500	B - 6C	Q410	G - 2S		D - 2S		F - 4S
CN42	E - 1C	IC501	B - 5C	Q411	I - 7S	RV500	B - 4C	TP412	D - 1C
	E - 1S	IC502	B - 4C	Q412	H - 6S		B - 4S		D - 1S
		IC503	B - 5C	Q413	I - 6S	RV501	C - 7C	TP413	E - 1C
CV400	I - 8C	IC504	B - 6C	Q414	H - 6S		C - 7S		E - 1S
		IC505	D - 6C	Q415	G - 5S	RV502	C - 7C	TP414	F - 5C
D100	C - 3S		D - 6S	Q416	G - 4S		C - 7S		F - 5S
D101	C - 5S	IC506	C - 7C	Q417	G - 4S	RV600	E - 7C	TP500	D - 7C
D102	C - 5S	IC507	D - 7C	Q600	F - 8S		E - 7S		D - 7S
D103	C - 4S		D - 7S	Q601	F - 8S	RV601	E - 8C	TP501	C - 7C
D200	A - 3S	IC508	D - 7C	Q602	F - 8S		E - 8S		C - 7S
D201	A - 5C	IC509	B - 8C	Q603	F - 8S	RV602	F - 7C	TP502	D - 8C
D400	G - 2S	IC510	B - 8C	Q604	G - 8S		F - 7S		D - 8S
D900	C - 2S	IC511	B - 7C	Q605	G - 8S	RV605	G - 8C	TP503	D - 8C
			B - 7S	Q606	G - 8S		G - 8S		D - 8S
DL300	G - 3C	IC512	C - 7C	Q900	C - 2C			TP600	G - 6C
	F - 3S		C - 7S		C - 2S	TP100	E - 5C		G - 6S
		IC513	C - 8C	Q901	D - 2S		E - 5S	TP601	G - 7C
E100	D - 4C	IC600	G - 8C	Q902	B - 2C	TP101	F - 3C		G - 7S
	D - 4S	IC601	G - 7C		B - 2S		F - 3S	TP602	E - 8C
E200	A - 5C		G - 7S	Q903	B - 2S	TP102	C - 4C		E - 8S
	A - 5S	IC900	B - 3C	Q904	B - 1C		C - 4S	TP603	F - 8C
E300	I - 2C		B - 3S		B - 1S	TP103	E - 4C		F - 8S
	I - 2S	IC901	B - 2C				E - 4S		
E500	C - 8C		B - 2S	RV100	F - 6C	TP104	F - 4C	X400	I - 8C
	C - 8S				F - 6S		F - 4S	X500	C - 8C
E600	G - 7C	LV400	H - 7C	RV108	C - 4C	TP200	D - 8C		
	G - 7S				C - 4S		D - 8S		
E900	D - 2C	Q100	D - 3S	RV200	B - 6C	TP201	A - 6C		
	D - 2S	Q101	E - 3S		B - 6S		A - 6S		
		Q102	D - 4S	RV201	A - 4C	TP202	A - 6C		
FL100	E - 6C	Q103	D - 5S		A - 4S		A - 6S		
	E - 6S	Q104	E - 6S	RV202	A - 4C	TP203	A - 6C		
FL300	H - 2C	Q105	E - 5S		A - 4S		A - 6S		
	H - 2S	Q119	F - 5S	RV307	I - 2C	TP300	I - 1C		
FL400	G - 5C	Q120	F - 5S		I - 2S		I - 1S		
	G - 5S	Q121	D - 4S	RV308	F - 3C	TP302	H - 3C		
FL600	G - 8C	Q122	C - 5S		F - 3S		H - 3S		
	G - 8S	Q200	A - 4S	RV309	E - 2C	TP303	G - 3C		
FL601	H - 8C	Q201	B - 4S		E - 2S		G - 3S		
	H - 8S	Q202	A - 4S	RV400	H - 6C	TP304	I - 3C		
		Q203	B - 4S		H - 6S		I - 3S		
IC100	D - 5C	Q313	G - 3S	RV401	G - 6C	TP305	I - 4C		
IC102	C - 3C	Q314	G - 3S		G - 6S		I - 4S		
	C - 3S	Q315	G - 4C	RV402	F - 4C	TP401	G - 5C		
IC103	C - 4C	Q316	F - 3S		F - 4S		G - 5S		
IC104	C - 6C	Q317	G - 3S						
IC105	C - 5C								

C; COMPONENT SIDE
S; SOLDERING SIDE

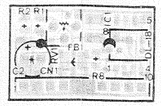


PR-104/-104P — COMPONENT SIDE —
1-623-987-12 (2)
VA-500
VA-500P

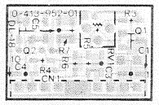
PR-104/-104P, DL-18/-18A, NR-27/-27A



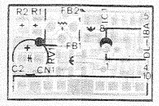
PR-104/-104P — SOLDERING SIDE —
1-623-987-12 (2)
VA-500
VA-500P



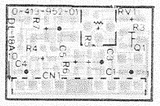
DL-18 — COMPONENT SIDE —
1-623-994-11 (1)
VA-500
VA-500P



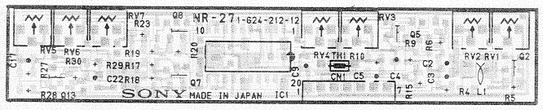
DL-18 — SOLDERING SIDE —
1-623-994-11 (1)
VA-500
VA-500P



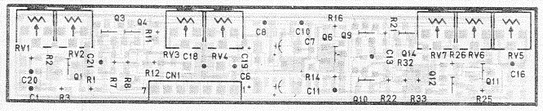
DL-18A — COMPONENT SIDE —
1-623-994-21 (1)
VA-500
VA-500P



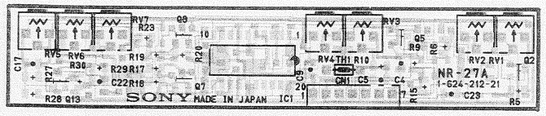
DL-18A — SOLDERING SIDE —
1-623-994-21 (1)
VA-500
VA-500P



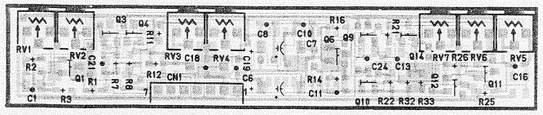
NR-27 — COMPONENT SIDE —
1-624-212-12 (2)
VA-500 (NR-27)
VA-500P (NR-27A)



NR-27 — SOLDERING SIDE —
1-624-212-12 (2)
VA-500 (NR-27)
VA-500P (NR-27A)



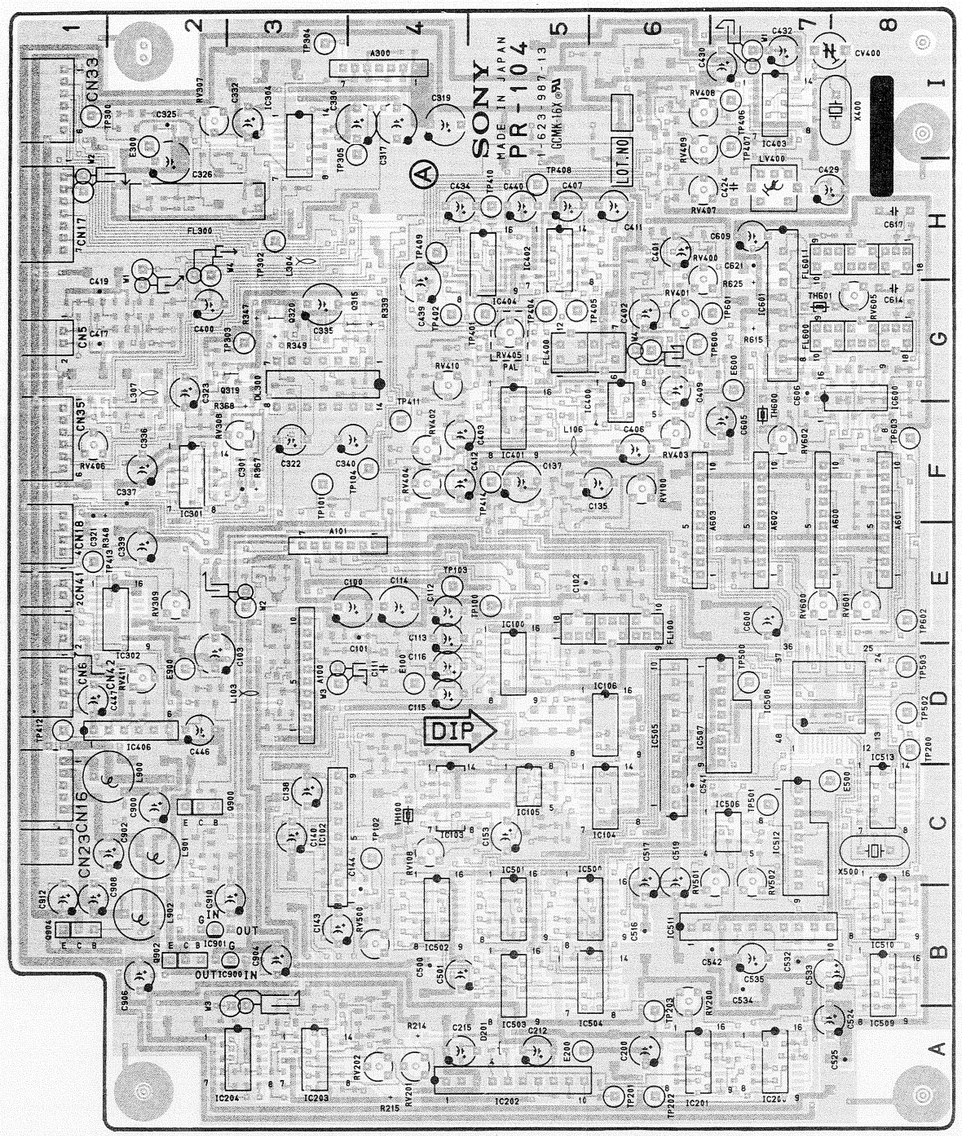
NR-27A — COMPONENT SIDE —
1-624-212-21 (1)
VA-500P



NR-27A — SOLDERING SIDE —
1-624-212-21 (1)
VA-500P

PR-104/-104P; CTDM EXPANDER AND CHROMA ENCODE, Y/C MIX

J	: S/N	10676 and Higher
UC	: S/N	11372 and Higher
EK	: S/N	11346 and Higher



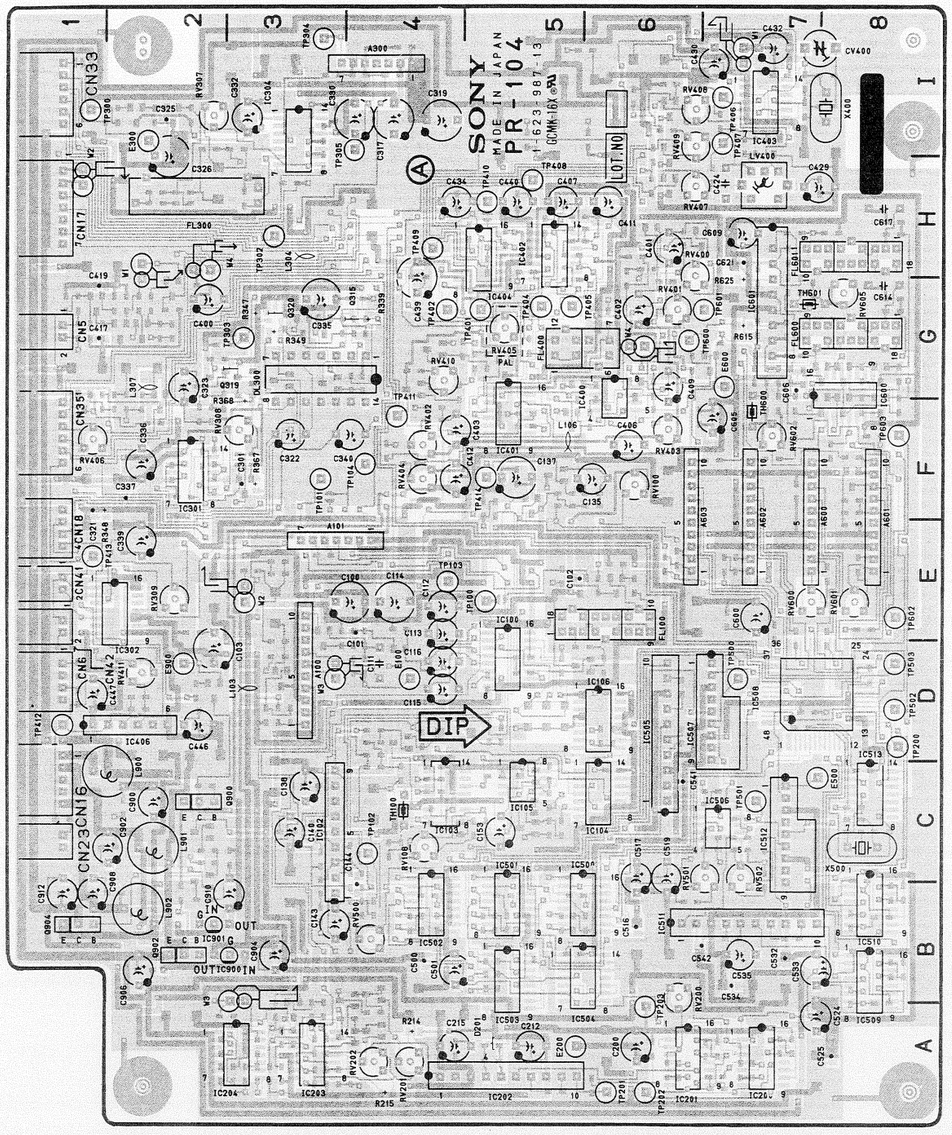
PR-104/-104P — COMPONENT SIDE —

1-623-987-13 (1)
VA-500
VA-500P

PR-104/-104P

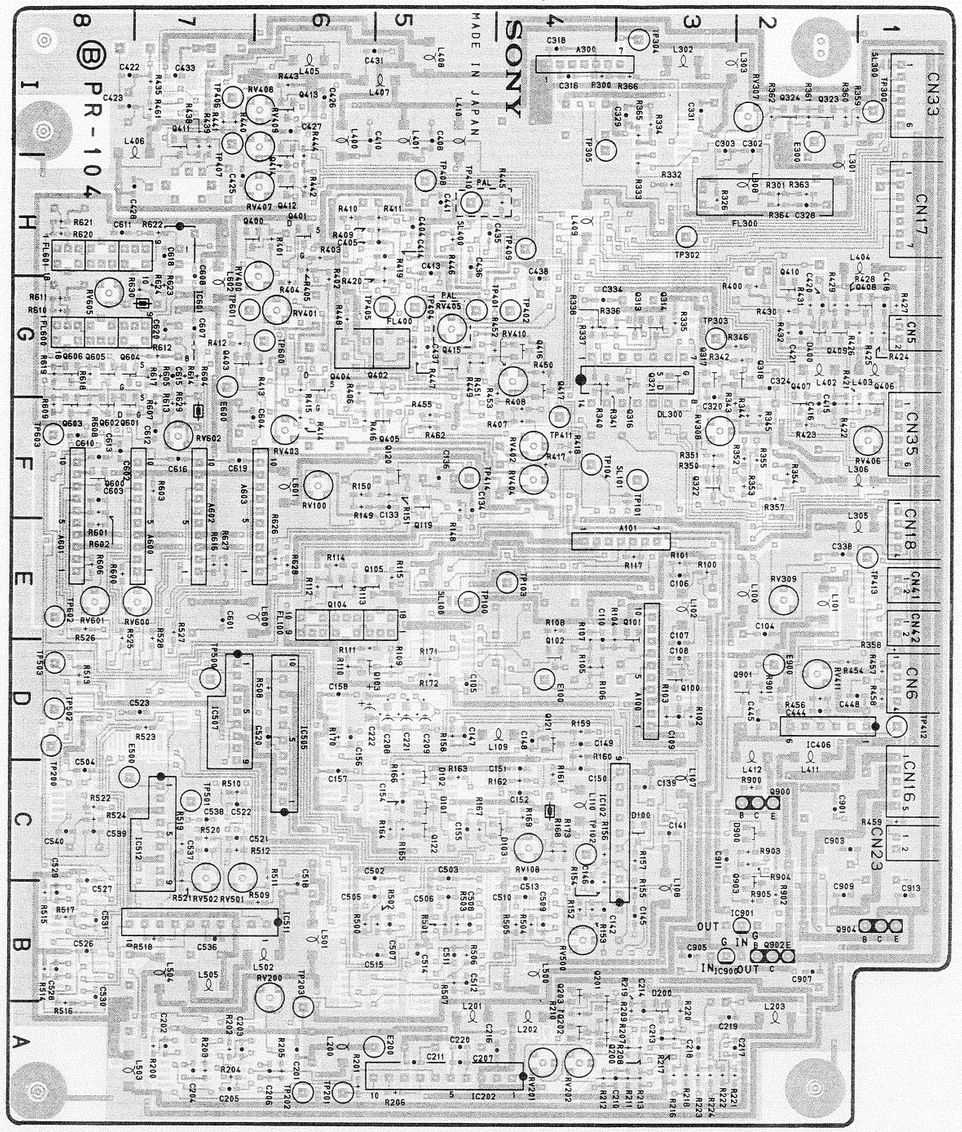
PR-104/-104P; CTDM EXPANDER AND CHROMA ENCODE, Y/C MIX

J	:	S/N 10676 and Higher
UC	:	S/N 11372 and Higher
EK	:	S/N 11346 and Higher



PR-104/-104P — COMPONENT SIDE —

1-623-987-13 (1)
VA-500
VA-500P



PR-104/-104P — SOLDERING SIDE —

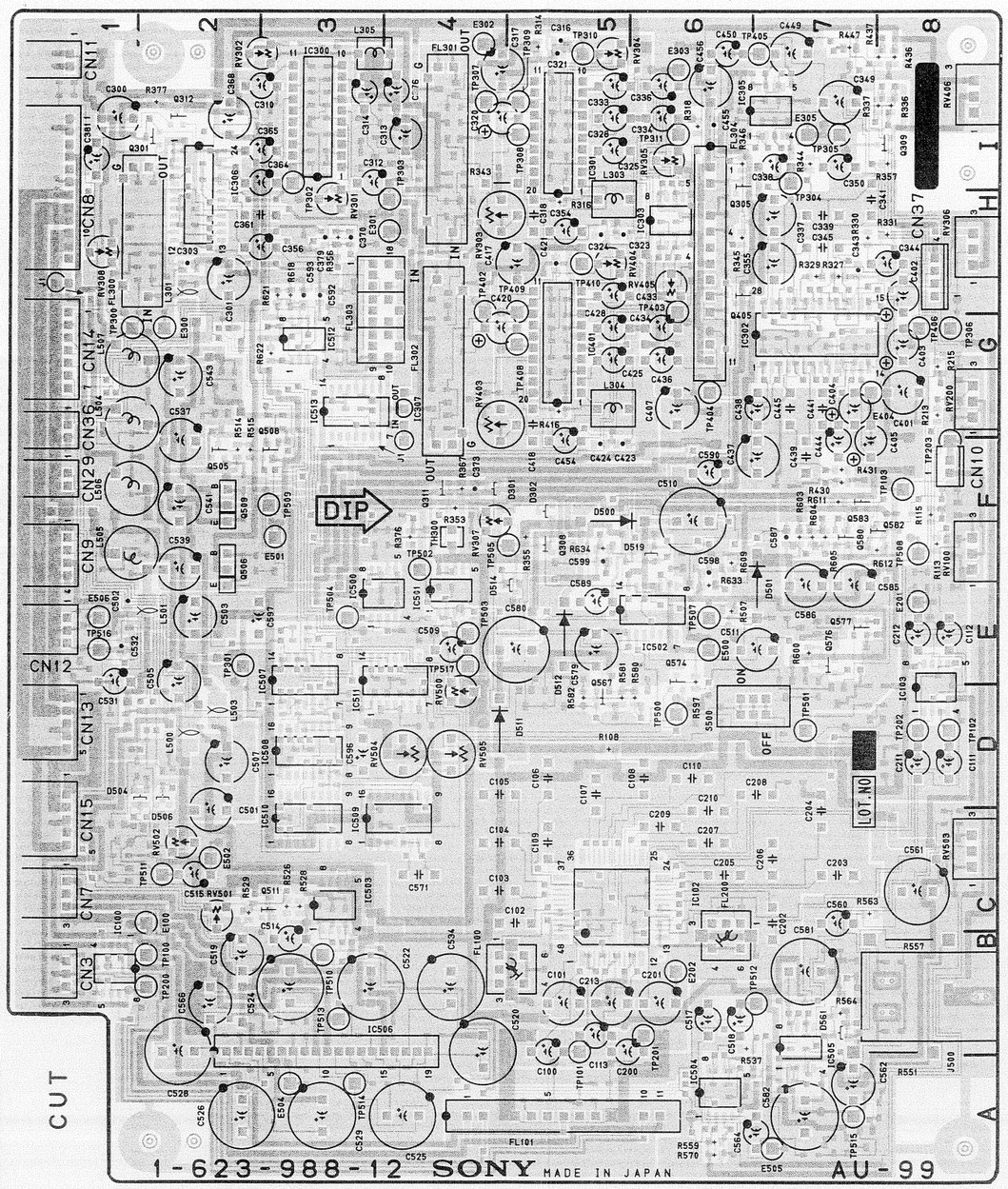
1-623-987-13 (1)
VA-500
VA-500P

AU-99/-99P 1-623-988-12

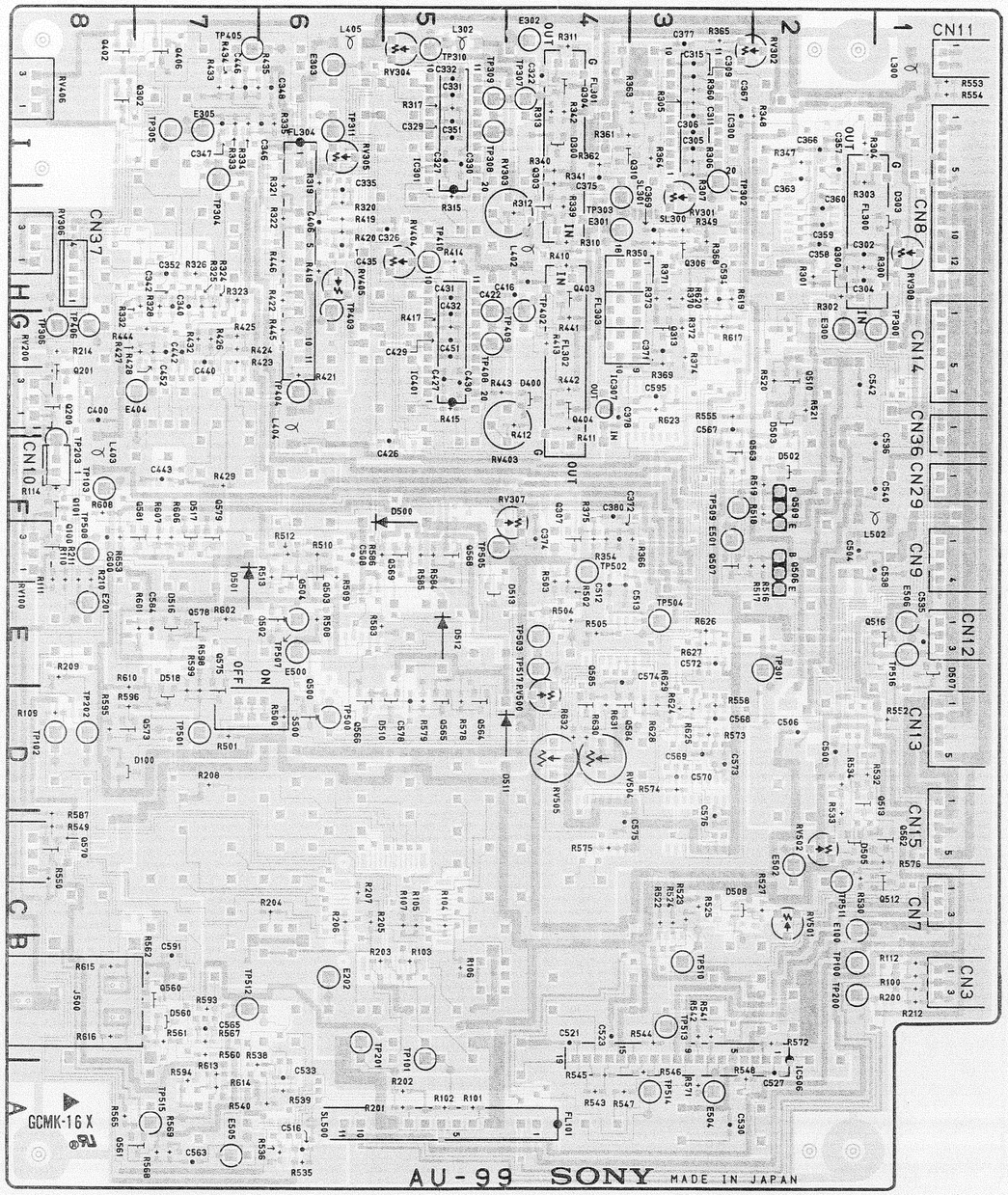
CN3	B - 1C	E301	H - 4C	IC510	C - 3C	Q582	F - 8C	TP300	G - 1C	TP513	B - 3C
	B - 1S		H - 4S	IC511	E - 4C	Q583	F - 7C		G - 1S		B - 3S
CN7	C - 1C	E302	I - 4C	IC512	G - 3C	Q584	D - 3S	TP301	E - 2C	TP514	A - 3C
	C - 1S		I - 4S	IC513	G - 3C				E - 2S		A - 3S
CN8	I - 1C	E303	I - 6C			RV100	F - 8C	TP302	I - 3C	TP515	A - 7C
	I - 1S		I - 6S	Q100	F - 8S		F - 8S		I - 3S		A - 7S
CN9	F - 1C	E305	I - 7C	Q101	F - 8S	RV200	G - 8C	TP303	H - 4C	TP516	E - 1C
	F - 1S		I - 7S	Q200	G - 8S		G - 8S		H - 4S		E - 1S
CN10	F - 8C	E404	G - 7C	Q201	G - 8S	RV301	H - 3C	TP304	I - 7C	TP517	E - 4C
	F - 8S		G - 7S	Q300	H - 2S		H - 3S		I - 7S		E - 4S
CN11	I - 1C	E500	E - 6C	Q301	I - 2C	RV302	I - 2C	TP305	I - 7C		
	I - 1S		E - 6S	Q302	I - 8S		I - 2S		I - 7S		
CN12	E - 1C	E501	F - 3C	Q303	H - 4S	RV303	H - 4C	TP306	G - 8C		
	E - 1S		F - 3S	Q304	I - 4S		H - 4S		G - 8S		
CN13	D - 1C	E502	C - 2C	Q305	I - 6C	RV304	I - 5C	TP307	I - 4C		
	D - 1S		C - 2S	Q306	H - 3S		I - 5S		I - 4S		
CN14	G - 1C	E504	A - 3C	Q307	F - 4S	RV305	I - 6C	TP308	I - 5C		
	G - 1S		A - 3S	Q308	G - 3C		I - 6S		I - 5S		
CN15	C - 1C	E505	A - 7C	Q309	I - 8C	RV306	H - 8C	TP309	I - 5C		
	C - 1S		A - 7S	Q310	I - 3S		H - 8S		I - 5S		
CN29	F - 1C	E506	E - 1C	Q311	F - 4C	RV307	F - 4C	TP310	I - 5C		
	F - 1S		E - 1S	Q312	I - 2C		F - 4S		I - 5S		
CN36	G - 1C			Q313	G - 3S	RV308	H - 1C	TP311	I - 6C		
	G - 1S	FL100	B - 4C	Q402	I - 8S		H - 1S		I - 6S		
CN37	H - 8S	FL101	A - 5C	Q403	H - 4S	RV403	G - 5C	TP402	H - 4C		
			A - 4S	Q404	G - 4S		G - 5S		H - 4S		
D100	D - 7S	FL200	C - 6C	Q405	H - 6C	RV404	H - 5C	TP403	H - 6C		
D300	I - 4S	FL300	H - 1C	Q406	I - 7S		H - 5S		H - 6S		
D301	F - 4C		H - 2S	Q500	D - 6S	RV405	H - 6C	TP404	G - 6C		
D302	F - 5C	FL301	I - 4C	Q502	E - 6S		H - 6S		G - 6S		
D400	G - 4S		I - 4S	Q503	E - 6S	RV406	I - 8C	TP405	I - 7C		
D500	F - 5C	FL302	G - 4C	Q504	E - 6S		I - 8S		I - 7S		
	F - 5S		G - 4S	Q505	F - 2C	RV500	D - 4C	TP406	G - 8C		
D501	E - 7C	FL303	H - 3C	Q506	E - 2C		D - 4S		G - 8S		
	E - 7S		H - 3S		E - 2S	RV501	C - 2C	TP408	G - 5C		
D502	F - 2S	FL304	I - 6C	Q507	E - 3S		C - 2S		G - 5S		
D503	G - 2S		I - 6S	Q508	F - 3C	RV502	C - 2C	TP409	H - 5C		
D504	D - 2C			Q509	F - 2C		C - 2S		H - 5S		
D505	C - 2S	IC100	B - 1C		F - 2S	RV503	C - 8C	TP410	H - 5C		
D506	D - 2C	IC102	C - 6C	Q510	G - 2S	RV504	D - 4C		H - 5S		
D507	E - 1S	IC103	D - 8C	Q511	C - 3C		D - 4S	TP500	D - 6C		
D508	C - 3S	IC300	I - 3C	Q512	C - 1S	RV505	D - 4C		D - 6S		
D510	D - 5S		I - 3S	Q513	D - 1S		D - 4S	TP501	D - 7C		
D511	D - 4C	IC301	I - 5C	Q516	E - 1S				D - 7S		
	D - 4S		I - 5S	Q560	B - 7S	S500	D - 6C	TP502	E - 4C		
D512	E - 5C	IC302	G - 7C	Q561	A - 8S		D - 6S		E - 4S		
	E - 5S	IC303	H - 6C	Q562	C - 1S			TP503	E - 4C		
D513	E - 5S	IC305	I - 7C	Q563	F - 3S	TP100	B - 2C		E - 4S		
D514	E - 5C	IC306	I - 2C	Q564	D - 5S		B - 2S	TP504	E - 3C		
D516	E - 7S	IC307	G - 4C	Q565	D - 5S	TP101	B - 5C		E - 3S		
D517	F - 7S		G - 4S	Q566	D - 6S		B - 5S	TP505	F - 4C		
D518	E - 7S	IC401	G - 5C	Q567	D - 5C	TP102	D - 8C		F - 4S		
D519	F - 6C		G - 5S	Q568	F - 5S		D - 8S	TP507	E - 6C		
D560	B - 7S	IC500	E - 4C	Q569	E - 5S	TP103	F - 8C		E - 6S		
D561	B - 7C	IC501	E - 4C	Q570	C - 8S		F - 8S	TP508	F - 8C		
		IC502	E - 6C	Q573	D - 7S	TP200	B - 2C		F - 8S		
E100	C - 2C	IC503	C - 3C	Q574	E - 6C		B - 2S	TP509	F - 3C		
	C - 2S	IC504	A - 6C	Q575	E - 7S	TP201	B - 6C		F - 3S		
E201	E - 8C	IC505	B - 7C	Q576	E - 7C		B - 6S	TP510	B - 3C		
	E - 8S	IC506	B - 3C	Q577	E - 7C	TP202	D - 8C		B - 3S		
E202	B - 6C		B - 3S	Q578	E - 7S		D - 8S	TP511	C - 2C		
	B - 6S	IC507	E - 3C	Q579	F - 7S	TP203	F - 8C		C - 2S		
E300	G - 2C	IC508	D - 3C	Q580	F - 7C		F - 8S	TP512	B - 7C		
	G - 2S	IC509	C - 4C	Q581	F - 7S				B - 7S		

C; COMPONENT SIDE
S; SOLDERING SIDE

AU-99/-99P; AUDIO SYSTEM

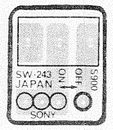


AU-99/-99P — COMPONENT SIDE —
1-623-988-12 (2)
VA-500
VA-500P

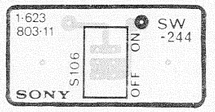


AU-99/-99P — SOLDERING SIDE —
1-623-988-12 (2)
VA-500
VA-500P

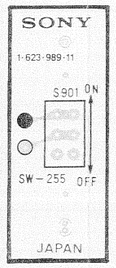
CN-214; BNC RELAY BOARD
CN-228; RF MODULATOR CONNECTION BOARD
MT-42; AUDIO MIX METER
SW-234; AUDIO MONITOR SELECT SWITCH
SW-235; AUDIO MIX SWITCH
SW-243; POWER SWITCH CONTROL
SW-244; DOLBY ON/OFF SWITCH
SW-255; 75Ω TERMINATE SWITCH



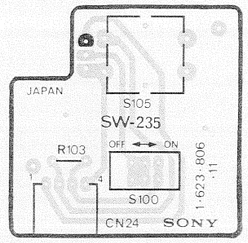
SW-243 — COMPONENT SIDE —
1-623-804-11 (1)
VA-500
VA-500P



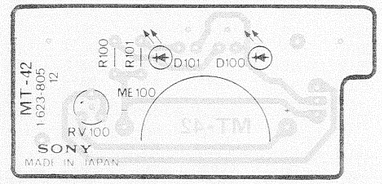
SW-244 — COMPONENT SIDE —
1-623-803-11 (1)
VA-500
VA-500P



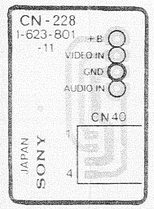
SW-255 — COMPONENT SIDE —
1-623-989-11 (1)
VA-500
VA-500P



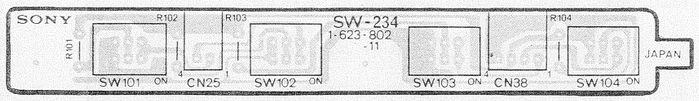
SW-235 — COMPONENT SIDE —
1-623-806-11 (1)
VA-500
VA-500P



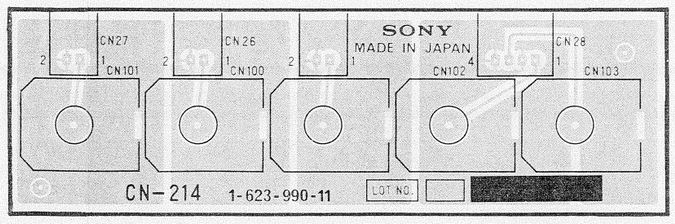
MT-42 — COMPONENT SIDE —
1-623-805-12 (1)
VA-500
VA-500P



CN-228 — COMPONENT SIDE —
1-623-801-11 (1)
VA-500
VA-500P



SW-234 — COMPONENT SIDE —
1-623-802-11 (1)
VA-500
VA-500P



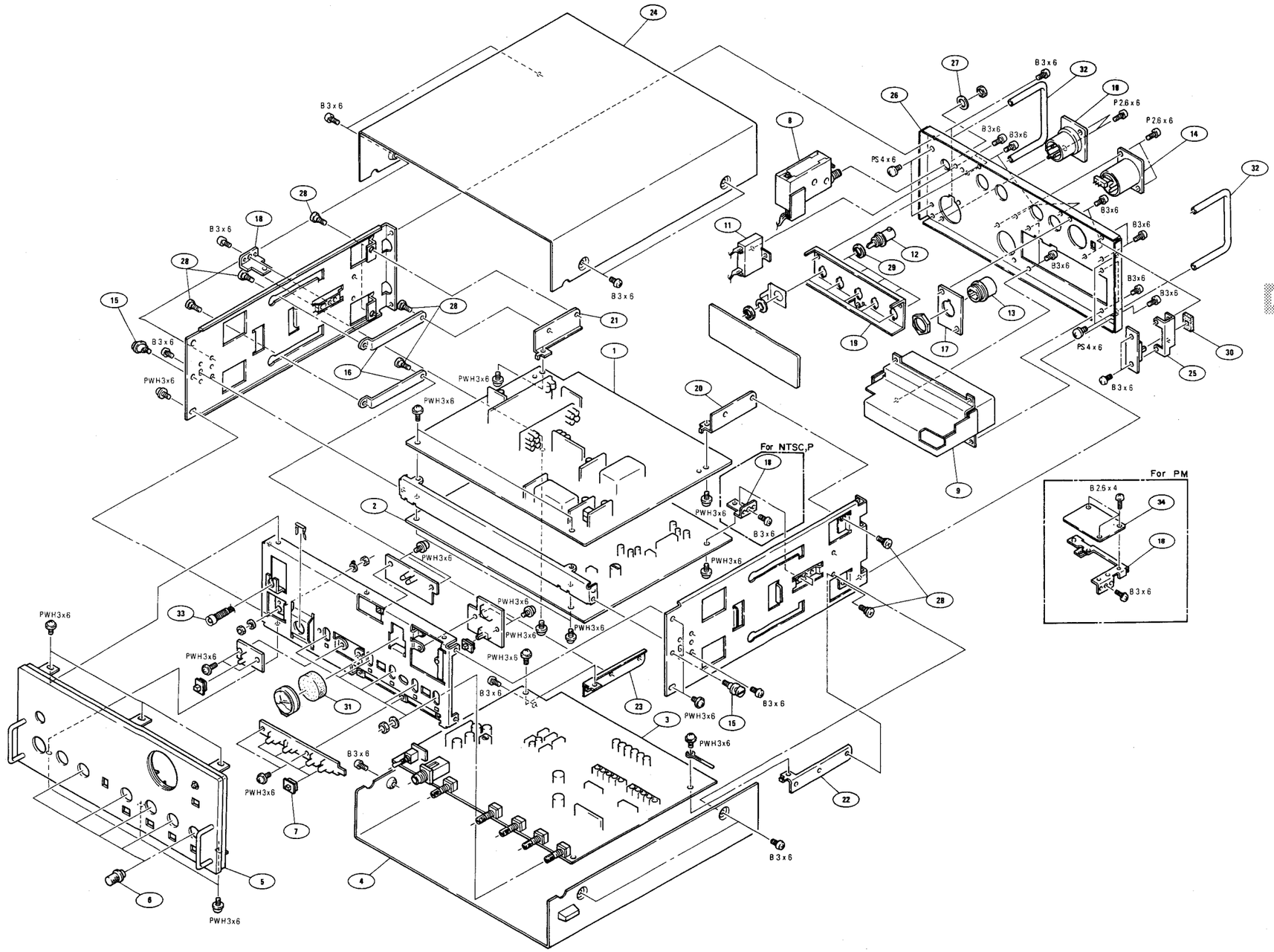
CN-214 — COMPONENT SIDE —
1-623-990-11 (1)
VA-500
VA-500P

SECTION 9
SPARE PARTS

9-1. PARTS INFORMATION

1. **The shaded and ⚠ -marked components are critical to safety.**
   Replace only with the same components as specified.
2. Replacement Parts supplied from the Sony Parts Center will sometimes have a different shape from the original parts. This is due to "improved parts and/or engineering changes" or "standardization of genuine parts."
   This manual's exploded views and electrical spare parts list indicate the part numbers of "the standardized genuine parts at the present".
   Regarding engineering part changes by the engineering department, refer to Sony service bulletins and service manual supplements.
3. The parts marked with "s" in the SP column of the exploded views and electrical spare parts lists are normally stocked for replacement purposes.
   The parts marked with "o" in the SP column are not normally required for routine service work.
   Orders for parts marked with "o" will be processed, but allow for additional delivery time.
4. Items with no part number and/or no description are not stocked because they are seldom required for routine service.

9-2. EXPLODED VIEW



No.	Parts No.	SP	Description
1	A-6257-178-A	o	MOUNTED CIRCUIT BOARD, PR-103 (For UC, J)
	A-6257-185-A	o	MOUNTED CIRCUIT BOARD, PR-103P (For P)
	A-6257-230-A	o	MOUNTED CIRCUIT BOARD, PR-103PM (For PM)
2	A-6257-179-A	o	MOUNTED CIRCUIT BOARD, PR-104 (For UC, J)
	A-6257-186-A	o	MOUNTED CIRCUIT BOARD, PR-104P (For P)
	A-6257-231-A	o	MOUNTED CIRCUIT BOARD, PR-104PM (For PM)
3	A-6261-039-A	o	MOUNTED CIRCUIT BOARD, AU-99 (For UC, J, PM)
	A-6261-041-A	o	MOUNTED CIRCUIT BOARD, AU-99P (For P)
4	X-2125-507-2	o	CASE BLOCK ASSY
5	X-2125-508-2	o	PANEL ASSY (For UC, J)
	X-2125-512-2	o	PANEL ASSY (For P)
	X-2125-520-1	o	PANEL ASSY (For PM)
6	X-3717-237-1	s	KNOB ASSY, VOL
7	X-3719-114-1	s	KNOB ASSY (2 POSI)
8	1-464-718-21	s	RF MODULATOR (RFU-856) (For P)
	1-464-841-21	s	RF MODULATOR (RFU-789) (For UC, PM)
	1-464-842-21	s	RF MODULATOR (RFU-788) (For J)
9	1-464-867-11	s	CONVERTER UNIT, DC-DC (CD-73K)
10	1-509-176-31	s	CONNECTOR (RECEPTACLE) 3P (For UC, P, PM)
	1-509-184-31	s	CONNECTOR (RECEPTACLE) 3P (For J)
⚠ 11	1-532-543-21	s	BREAKER, CIRCUIT
12	1-562-227-21	s	RECEPTACLE, BNC
13	1-563-971-11	s	CONNECTOR (R-F) 20P
14	1-564-603-11	s	CONNECTOR (WITH DC SW) 4P
15	2-125-531-01	s	SUSPENSION
16	2-125-532-01	o	STAY
17	2-125-533-01	o	BRACKET, JACK
18	2-125-537-01	o	BRACKET, L (For UC, J, P)
	2-125-598-01	o	BRACKET (For PM)
19	2-125-538-01	o	BRACKET, BNC
20	2-125-539-01	o	BRACKET (A)
21	2-125-540-01	o	BRACKET (B)
22	2-125-541-01	o	BRACKET (C)
23	2-125-542-01	o	BRACKET (D)
24	2-125-546-11	o	CASE
25	2-125-556-01	o	BRACKET, SW
26	2-125-557-01	o	PANEL, REAR (For UC, J, PM)
	2-125-557-11	o	PANEL, REAR (For P)
27	2-371-215-01	s	WASHER
28	3-613-164-03	o	SHAFT, STEP
29	3-654-545-01	s	SPACER, BNC
30	2-125-569-01	o	CUSHION, SW
31	3-719-133-01	o	CUSHION, METER
32	4-879-919-01	o	ANGLE, GUARD
33	8-719-907-03	s	DIODE BD703G
34	A-6268-310-A	o	MOUNTED CIRCUIT BOARD, DUS-287 (For PM)

9-3. ELECTRICAL PARTS LIST

ABBREVIATIONS

Ref. No.	Description	Ref. No.	Description	Ref. No.	Description
C□□, CT□□	CAPACITOR	IC□□	IC	Q□□	TRANSISTOR
CF□□	CERAMIC FILTER	J□□	JACK	R□□, RV□□	RESISTOR
CN□□	CONNECTOR	L□□	INDUCTOR	RY□□	RELAY
D□□	DIODE	M□□	MOTOR	S□□, SW□□	SWITCH
DL□□	DELAY LINE	ME□□	METER	SB□□	SOLAR BATTERY
F□□	FUSE	MIC□□	MICROPHONE	T□□	TRANSFORMER
FB□□	FERRITE BEAD	PG□□	PG COIL	TH□□	THERMISTOR
FL□□	FILTER	PL□□	LAMP	X□□	CRYSTAL
H□□	HEAD	PM□□	SOLENOIDE		

All capacitors are in micro farads unless otherwise specified.

All inductors are in micro henries unless otherwise specified.

All resistors are in ohms.

General Purpose Electrical Parts List

Parts that are not listed in the "reference numbers order list" are shown in following list.
Reference numbers are omitted.

Part No.	SP	Description
CAPACITOR		
. CHIP CERAMIC		
1-163-083-00	s	CAP, CHIP CERAMIC 1pF ±0.25pF 50V
1-163-085-00	s	CAP, CHIP CERAMIC 2pF ±0.25pF 50V
1-163-087-00	s	CAP, CHIP CERAMIC 4pF ±0.25pF 50V
1-163-089-00	s	CAP, CHIP CERAMIC 6pF ±0.5pF 50V
1-163-091-00	s	CAP, CHIP CERAMIC 8pF ±0.5pF 50V
1-163-093-00	s	CAP, CHIP CERAMIC 10pF 5% 50V
1-163-097-00	s	CAP, CHIP CERAMIC 15pF 5% 50V
1-163-101-00	s	CAP, CHIP CERAMIC 22pF 5% 50V
1-163-105-00	s	CAP, CHIP CERAMIC 33pF 5% 50V
1-163-109-00	s	CAP, CHIP CERAMIC 47pF 5% 50V
1-163-113-00	s	CAP, CHIP CERAMIC 68pF 5% 50V
1-163-117-00	s	CAP, CHIP CERAMIC 100pF 5% 50V
1-163-121-00	s	CAP, CHIP CERAMIC 150pF 5% 50V
1-163-125-00	s	CAP, CHIP CERAMIC 220pF 5% 50V
1-163-129-00	s	CAP, CHIP CERAMIC 330pF 5% 50V
1-163-133-00	s	CAP, CHIP CERAMIC 470pF 5% 50V
1-163-137-00	s	CAP, CHIP CERAMIC 680pF 5% 50V
1-163-141-00	s	CAP, CHIP CERAMIC 1000pF 5% 50V
1-163-145-00	s	CAP, CHIP CERAMIC 1500pF 10% 50V
1-163-013-00	s	CAP, CHIP CERAMIC 2200pF 10% 50V
1-163-015-00	s	CAP, CHIP CERAMIC 3300pF 10% 50V
1-163-017-00	s	CAP, CHIP CERAMIC 4700pF 10% 50V
1-163-019-00	s	CAP, CHIP CERAMIC 6800pF 10% 50V
1-163-021-00	s	CAP, CHIP CERAMIC 0.01 10% 50V
1-163-023-00	s	CAP, CHIP CERAMIC 0.015 10% 50V
1-163-033-00	s	CAP, CHIP CERAMIC 0.022 10% 25V
1-163-034-00	s	CAP, CHIP CERAMIC 0.033 50V
1-163-035-00	s	CAP, CHIP CERAMIC 0.047 50V
1-163-036-00	s	CAP, CHIP CERAMIC 0.068 25V
1-163-038-00	s	CAP, CHIP CERAMIC 0.1 25V

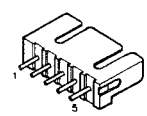
Part No.	SP	Description
. ELECTROLYTIC		
1-124-902-00	s	CAP, ELECT 0.47 20% 50V
1-124-791-11	s	CAP, ELECT 1.0 20% 100V
1-124-925-11	s	CAP, ELECT 2.2 20% 100V
1-123-382-00	s	CAP, ELECT 3.3 20% 100V
1-124-927-00	s	CAP, ELECT 4.7 20% 100V
1-123-875-91	s	CAP, ELECT 10 20% 50V
1-124-908-11	s	CAP, ELECT 22 20% 50V
1-124-963-11	s	CAP, ELECT 33 20% 16V
1-124-482-11	s	CAP, ELECT 33 20% 35V
1-124-917-11	s	CAP, ELECT 33 20% 63V
1-124-446-11	s	CAP, ELECT 47 20% 10V
1-124-477-11	s	CAP, ELECT 47 20% 25V
1-124-910-11	s	CAP, ELECT 47 20% 50V
1-124-443-00	s	CAP, ELECT 100 20% 10V
1-126-101-11	s	CAP, ELECT 100 20% 16V
1-124-478-11	s	CAP, ELECT 100 20% 25V
1-124-122-11	s	CAP, ELECT 100 20% 50V
1-124-444-00	s	CAP, ELECT 220 20% 10V
1-124-120-11	s	CAP, ELECT 220 20% 25V
1-124-484-11	s	CAP, ELECT 220 20% 35V
1-124-911-11	s	CAP, ELECT 220 20% 50V
1-124-442-00	s	CAP, ELECT 330 20% 6.3V
1-124-604-00	s	CAP, ELECT 330 20% 10V
1-124-119-00	s	CAP, ELECT 330 20% 16V
1-124-479-11	s	CAP, ELECT 330 20% 25V
1-124-485-11	s	CAP, ELECT 330 20% 35V
1-124-912-11	s	CAP, ELECT 330 20% 50V
1-124-472-11	s	CAP, ELECT 470 20% 10V
1-124-475-11	s	CAP, ELECT 470 20% 16V
1-124-480-11	s	CAP, ELECT 470 20% 25V
1-126-104-11	s	CAP, ELECT 470 20% 35V
1-124-913-11	s	CAP, ELECT 470 20% 50V

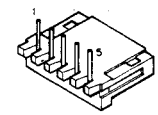
Part No.	SP	Description	
CONNECTOR			
1-564-001-11	o	RECEPTACLE	2P MALE (STRAIGHT TYPE)
1-564-012-11	o	RECEPTACLE	2P MALE (ANGLE TYPE)
1-562-147-11	o	HOUSING	2P
1-564-026-21	o	CONTACT	AWG24-30
1-564-681-21	o	CONTACT	AWG32
1-564-002-11	o	RECEPTACLE	3P MALE (STRAIGHT TYPE)
1-564-013-11	o	RECEPTACLE	3P MALE (ANGLE TYPE)
1-562-148-11	o	HOUSING	3P
1-564-026-21	o	CONTACT	AWG24-30
1-564-681-21	o	CONTACT	AWG32
1-564-003-11	o	RECEPTACLE	4P MALE (STRAIGHT TYPE)
1-564-014-11	o	RECEPTACLE	4P MALE (ANGLE TYPE)
1-562-149-11	o	HOUSING	4P
1-564-026-21	o	CONTACT	AWG24-30
1-564-681-21	o	CONTACT	AWG32
1-564-004-11	o	RECEPTACLE	5P MALE (STRAIGHT TYPE)
1-564-015-11	o	RECEPTACLE	5P MALE (ANGLE TYPE)
1-562-150-11	o	HOUSING	5P
1-564-026-21	o	CONTACT	AWG24-30
1-564-681-21	o	CONTACT	AWG32
1-564-005-11	o	RECEPTACLE	6P MALE (STRAIGHT TYPE)
1-564-016-11	o	RECEPTACLE	6P MALE (ANGLE TYPE)
1-562-151-11	o	HOUSING	6P
1-564-026-21	o	CONTACT	AWG24-30
1-564-681-21	o	CONTACT	AWG32
1-564-006-11	o	RECEPTACLE	7P MALE (STRAIGHT TYPE)
1-564-017-11	o	RECEPTACLE	7P MALE (ANGLE TYPE)
1-562-152-11	o	HOUSING	7P
1-564-026-21	o	CONTACT	AWG24-30
1-564-681-21	o	CONTACT	AWG32
1-564-007-11	o	RECEPTACLE	8P MALE (STRAIGHT TYPE)
1-564-018-11	o	RECEPTACLE	8P MALE (ANGLE TYPE)
1-562-153-11	o	HOUSING	8P
1-564-026-21	o	CONTACT	AWG24-30
1-564-681-21	o	CONTACT	AWG32
1-564-008-41	o	RECEPTACLE	9P MALE (STRAIGHT TYPE)
1-564-019-11	o	RECEPTACLE	9P MALE (ANGLE TYPE)
1-562-154-11	o	HOUSING	9P
1-564-026-21	o	CONTACT	AWG24-30
1-564-681-21	o	CONTACT	AWG32
1-564-009-11	o	RECEPTACLE	10P MALE (STRAIGHT TYPE)
1-564-020-11	o	RECEPTACLE	10P MALE (ANGLE TYPE)
1-562-155-11	o	HOUSING	10P
1-564-026-21	o	CONTACT	AWG24-30
1-564-681-21	o	CONTACT	AWG32
1-564-010-21	o	RECEPTACLE	11P MALE (STRAIGHT TYPE)
1-564-021-11	o	RECEPTACLE	11P MALE (ANGLE TYPE)
1-562-156-11	o	HOUSING	11P
1-564-026-21	o	CONTACT	AWG24-30
1-564-681-21	o	CONTACT	AWG32
1-564-011-11	o	RECEPTACLE	12P MALE (STRAIGHT TYPE)
1-564-022-11	o	RECEPTACLE	12P MALE (ANGLE TYPE)
1-562-157-11	o	HOUSING	12P
1-564-026-21	o	CONTACT	AWG24-30
1-564-681-21	o	CONTACT	AWG32

Part No.	SP	Description	
1-564-683-11	o	RECEPTACLE	13P MALE (STRAIGHT TYPE)
1-564-743-11	o	RECEPTACLE	13P MALE (ANGLE TYPE)
1-562-627-11	o	HOUSING	13P
1-564-026-21	o	CONTACT	AWG24-30
1-564-681-21	o	CONTACT	AWG32
1-564-069-11	o	RECEPTACLE	14P MALE (STRAIGHT TYPE)
1-564-630-11	o	RECEPTACLE	14P MALE (ANGLE TYPE)
1-562-185-11	o	HOUSING	14P
1-564-026-21	o	CONTACT	AWG24-30
1-564-681-21	o	CONTACT	AWG32
1-564-855-11	o	RECEPTACLE	15P MALE (STRAIGHT TYPE)
1-564-877-11	o	RECEPTACLE	15P MALE (ANGLE TYPE)
1-562-958-11	o	HOUSING	15P
1-564-026-21	o	CONTACT	AWG24-30
1-564-681-21	o	CONTACT	AWG32

RECEPTACLE

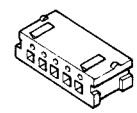
top-type receptacle *side-type receptacle*

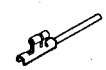




PLUG

housing *contact*





Part No.	SP	Description
RESISTOR		
. CHIP		
1-216-295-00	s	RES, CHIP 0 5% 1/10W
1-216-298-00	s	RES, CHIP 2.2 5% 1/10W
1-216-302-00	s	RES, CHIP 2.7 5% 1/10W
1-216-304-00	s	RES, CHIP 3.3 5% 1/10W
1-216-306-00	s	RES, CHIP 3.9 5% 1/10W
1-216-308-00	s	RES, CHIP 4.7 5% 1/10W
1-216-309-00	s	RES, CHIP 5.6 5% 1/10W
1-216-311-00	s	RES, CHIP 6.8 5% 1/10W
1-216-313-00	s	RES, CHIP 8.2 5% 1/10W
1-216-001-00	s	RES, CHIP 10 5% 1/10W
1-216-003-00	s	RES, CHIP 12 5% 1/10W
1-216-005-00	s	RES, CHIP 15 5% 1/10W
1-216-007-00	s	RES, CHIP 18 5% 1/10W
1-216-009-00	s	RES, CHIP 22 5% 1/10W
1-216-011-00	s	RES, CHIP 27 5% 1/10W
1-216-013-00	s	RES, CHIP 33 5% 1/10W
1-216-015-00	s	RES, CHIP 39 5% 1/10W
1-216-017-00	s	RES, CHIP 47 5% 1/10W
1-216-019-00	s	RES, CHIP 56 5% 1/10W
1-216-021-00	s	RES, CHIP 68 5% 1/10W
1-216-023-00	s	RES, CHIP 82 5% 1/10W
1-216-025-00	s	RES, CHIP 100 5% 1/10W
1-216-027-00	s	RES, CHIP 120 5% 1/10W
1-216-029-00	s	RES, CHIP 150 5% 1/10W
1-216-031-00	s	RES, CHIP 180 5% 1/10W
1-216-033-00	s	RES, CHIP 220 5% 1/10W
1-216-035-00	s	RES, CHIP 270 5% 1/10W
1-216-037-00	s	RES, CHIP 330 5% 1/10W
1-216-039-00	s	RES, CHIP 390 5% 1/10W
1-216-041-00	s	RES, CHIP 470 5% 1/10W
1-216-043-00	s	RES, CHIP 560 5% 1/10W
1-216-045-00	s	RES, CHIP 680 5% 1/10W
1-216-047-00	s	RES, CHIP 820 5% 1/10W
1-216-049-00	s	RES, CHIP 1k 5% 1/10W
1-216-051-00	s	RES, CHIP 1.2k 5% 1/10W
1-216-053-00	s	RES, CHIP 1.5k 5% 1/10W
1-216-055-00	s	RES, CHIP 1.8k 5% 1/10W
1-216-057-00	s	RES, CHIP 2.2k 5% 1/10W
1-216-059-00	s	RES, CHIP 2.7k 5% 1/10W
1-216-061-00	s	RES, CHIP 3.3k 5% 1/10W
1-216-063-00	s	RES, CHIP 3.9k 5% 1/10W
1-216-065-00	s	RES, CHIP 4.7k 5% 1/10W
1-216-067-00	s	RES, CHIP 5.6k 5% 1/10W
1-216-069-00	s	RES, CHIP 6.8k 5% 1/10W
1-216-071-00	s	RES, CHIP 8.2k 5% 1/10W
1-216-073-00	s	RES, CHIP 10k 5% 1/10W
1-216-075-00	s	RES, CHIP 12k 5% 1/10W
1-216-077-00	s	RES, CHIP 15k 5% 1/10W
1-216-079-00	s	RES, CHIP 18k 5% 1/10W
1-216-081-00	s	RES, CHIP 22k 5% 1/10W
1-216-083-00	s	RES, CHIP 27k 5% 1/10W
1-216-085-00	s	RES, CHIP 33k 5% 1/10W
1-216-087-00	s	RES, CHIP 39k 5% 1/10W
1-216-089-00	s	RES, CHIP 47k 5% 1/10W
1-216-091-00	s	RES, CHIP 56k 5% 1/10W

Part No.	SP	Description
1-216-093-00	s	RES, CHIP 68k 5% 1/10W
1-216-095-00	s	RES, CHIP 82k 5% 1/10W
1-216-097-00	s	RES, CHIP 100k 5% 1/10W
1-216-099-00	s	RES, CHIP 120k 5% 1/10W
1-216-101-00	s	RES, CHIP 150k 5% 1/10W
1-216-103-00	s	RES, CHIP 180k 5% 1/10W
1-216-105-00	s	RES, CHIP 220k 5% 1/10W
1-216-107-00	s	RES, CHIP 270k 5% 1/10W
1-216-109-00	s	RES, CHIP 330k 5% 1/10W
1-216-111-00	s	RES, CHIP 390k 5% 1/10W
1-216-113-00	s	RES, CHIP 470k 5% 1/10W
1-216-115-00	s	RES, CHIP 560k 5% 1/10W
1-216-117-00	s	RES, CHIP 680k 5% 1/10W
1-216-119-00	s	RES, CHIP 820k 5% 1/10W
1-216-121-00	s	RES, CHIP 1.0M 5% 1/10W
1-216-123-00	s	RES, CHIP 1.2M 5% 1/10W
1-216-125-00	s	RES, CHIP 1.5M 5% 1/10W
1-216-127-00	s	RES, CHIP 1.8M 5% 1/10W
1-216-129-00	s	RES, CHIP 2.2M 5% 1/10W
1-216-131-00	s	RES, CHIP 2.7M 5% 1/10W
1-216-133-00	s	RES, CHIP 3.3M 5% 1/10W

Ref.No	Parts No.	SP	Description
AU-99 BOARD			
	A-6261-039-A	o	MOUNTED CIRCUIT BOARD, AU-99
C100	1-124-257-00	s	ELECT 2.2 20% 50V
C101	1-124-120-11	s	ELECT 220 20% 16V
C102	1-130-479-00	s	MYLAR 0.0047 5% 50V
C103	1-136-173-00	s	FILM 0.47 5% 50V
C104	1-130-497-00	s	MYLAR 0.15 5% 50V
C105	1-130-485-00	s	MYLAR 0.015 5% 50V
C106	1-130-499-00	s	MYLAR 0.22 5% 50V
C107	1-130-493-00	s	MYLAR 0.068 5% 50V
C108	1-130-491-00	s	MYLAR 0.047 5% 50V
C109	1-130-481-00	s	MYLAR 0.0068 5% 50V
C110	1-130-483-00	s	MYLAR 0.01 5% 50V
C111	1-124-245-00	s	ELECT 4.7 20% 25V
C112	1-124-462-00	s	ELECT 10 20% 16V
C113	1-124-462-00	s	ELECT 10 20% 16V
C200	1-124-257-00	s	ELECT 2.2 20% 50V
C202	1-130-479-00	s	MYLAR 0.0047 5% 50V
C203	1-136-173-00	s	FILM 0.47 5% 50V
C204	1-130-497-00	s	MYLAR 0.15 5% 50V
C205	1-130-485-00	s	MYLAR 0.015 5% 50V
C206	1-130-499-00	s	MYLAR 0.22 5% 50V
C207	1-130-493-00	s	MYLAR 0.068 5% 50V
C208	1-130-491-00	s	MYLAR 0.047 5% 50V
C209	1-130-481-00	s	MYLAR 0.0068 5% 50V
C210	1-130-483-00	s	MYLAR 0.01 5% 50V
C211	1-124-245-00	s	ELECT 4.7 20% 25V
C212	1-124-462-00	s	ELECT 10 20% 16V
C213	1-124-236-00	s	ELECT 47 20% 16V
C300	1-123-661-00	s	ELECT 100 20% 6.3V
C301	1-123-661-00	s	ELECT 100 20% 6.3V
C310	1-124-257-00	s	ELECT 2.2 20% 50V
C312	1-124-638-11	s	ELECT 22 20% 6.3V
C313	1-124-224-00	s	ELECT 47 20% 6.3V
C314	1-124-638-11	s	ELECT 22 20% 6.3V
C317	1-123-661-00	s	ELECT 100 20% 6.3V
C318	1-162-714-11	s	CERAMIC 150PF 1% 50V
C320	1-131-341-00	s	TANTALUM 0.1 10% 35V
C325	1-131-375-00	s	TANTALUM 4.7 10% 10V
C328	1-124-258-00	s	ELECT 3.3 20% 50V
C330	1-162-638-11	s	CERAMIC CHIP 1 16V
C333	1-124-224-00	s	ELECT 47 20% 6.3V
C334	1-124-245-00	s	ELECT 4.7 20% 25V
C336	1-124-462-00	s	ELECT 10 20% 16V
C337	1-123-661-00	s	ELECT 100 20% 6.3V
C338	1-124-638-11	s	ELECT 22 20% 6.3V
C341	1-130-479-00	s	MYLAR 0.0047 5% 50V
C344	1-124-462-00	s	ELECT 10 20% 16V
C345	1-130-482-00	s	MYLAR 0.0082 5% 50V
C349	1-124-598-11	s	ELECT 22 20% 25V
C350	1-124-245-00	s	ELECT 4.7 20% 25V
C354	1-124-638-11	s	ELECT 22 20% 6.3V
C355	1-123-661-00	s	ELECT 100 20% 6.3V
C356	1-123-611-00	s	ELECT 1 20% 50V
C361	1-130-491-00	s	MYLAR 0.047 5% 50V
C364	1-124-638-11	s	ELECT 22 20% 6.3V
C365	1-124-462-00	s	ELECT 10 20% 16V
C368	1-123-661-00	s	ELECT 100 20% 6.3V
C376	1-124-462-00	s	ELECT 10 20% 16V
C377	1-163-012-00	s	CERAMIC CHIP 0.0018 10% 50V
C381	1-124-255-00	s	ELECT 1 20% 50V
C401	1-123-661-00	s	ELECT 100 20% 6.3V
C402	1-131-377-00	s	TANTALUM 10 10% 6.3V
C403	1-131-343-00	s	TANTALUM 0.22 10% 35V
C404	1-131-377-00	s	TANTALUM 10 10% 6.3V
C405	1-131-343-00	s	TANTALUM 0.22 10% 35V
C407	1-124-236-00	s	ELECT 47 20% 16V
C417	1-123-661-00	s	ELECT 100 20% 6.3V
C420	1-131-341-00	s	TANTALUM 0.1 10% 35V
C425	1-131-375-00	s	TANTALUM 4.7 10% 10V
C428	1-124-258-00	s	ELECT 3.3 20% 50V
C430	1-162-638-11	s	CERAMIC CHIP 1 16V
C433	1-124-224-00	s	ELECT 47 20% 6.3V
C434	1-124-245-00	s	ELECT 4.7 20% 25V
C436	1-124-462-00	s	ELECT 10 20% 16V
C437	1-123-661-00	s	ELECT 100 20% 6.3V
C438	1-124-638-00	s	ELECT 22 20% 6.3V
C439	1-130-490-11	s	MYLAR 0.039 5% 50V
C441	1-130-479-00	s	MYLAR 0.0047 5% 50V
C444	1-124-462-00	s	ELECT 10 20% 16V
C445	1-130-482-00	s	MYLAR 0.0082 5% 50V
C449	1-124-598-11	s	ELECT 22 20% 25V
C450	1-124-245-00	s	ELECT 4.7 20% 25V
C454	1-124-638-11	s	ELECT 22 20% 6.3V
C456	1-124-236-00	s	ELECT 47 20% 16V
C503	1-123-661-00	s	ELECT 100 20% 6.3V
C505	1-123-661-00	s	ELECT 100 20% 6.3V
C509	1-123-612-00	s	ELECT 2.2 20% 50V
C510	1-124-144-00	s	ELECT 220 20% 16V
C511	1-124-236-00	s	ELECT 47 20% 16V
C514	1-124-245-00	s	ELECT 4.7 20% 25V
C515	1-124-245-00	s	ELECT 4.7 20% 25V
C517	1-124-462-00	s	ELECT 10 20% 16V
C518	1-124-462-00	s	ELECT 10 20% 16V
C519	1-124-236-00	s	ELECT 47 20% 16V
C520	1-124-144-00	s	ELECT 220 20% 16V
C522	1-124-144-00	s	ELECT 220 20% 16V
C524	1-124-144-00	s	ELECT 220 20% 16V
C525	1-124-144-00	s	ELECT 220 20% 16V
C526	1-124-144-00	s	ELECT 220 20% 16V
C528	1-124-144-00	s	ELECT 220 20% 16V
C529	1-124-144-00	s	ELECT 220 20% 16V
C531	1-124-224-00	s	ELECT 47 20% 6.3V
C534	1-124-144-00	s	ELECT 220 20% 16V
C535	1-162-638-11	s	CERAMIC CHIP 1 16V
C539	1-123-661-00	s	ELECT 100 20% 6.3V
C541	1-123-661-00	s	ELECT 100 20% 6.3V
C560	1-124-245-00	s	ELECT 4.7 20% 25V
C564	1-124-245-00	s	ELECT 4.7 20% 25V
C566	1-124-236-00	s	ELECT 47 20% 16V
C571	1-130-472-00	s	MYLAR 0.0012 5% 50V
C579	1-124-598-11	s	ELECT 22 20% 25V
C585	1-124-245-00	s	ELECT 4.7 20% 25V
C586	1-124-236-00	s	ELECT 47 20% 16V
C589	1-123-611-00	s	ELECT 1 20% 50V
C590	1-123-611-00	s	ELECT 1 20% 50V
C596	1-131-347-00	s	TANTALUM 1 10% 35V
C597	1-131-347-00	s	TANTALUM 1 10% 35V

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

Ref.No	Parts No.	SP	Description
D100	8-719-101-23	s	1SS123
D300	8-719-101-23	s	1SS123
D301	8-719-101-23	s	1SS123
D302	8-719-101-23	s	1SS123
D303	8-719-101-23	s	1SS123
D400	8-719-101-23	s	1SS123
D500	8-719-200-02	s	10E2
D501	8-719-200-02	s	10E2
D502	8-719-105-82	s	RD5.1M-B2
D503	8-719-106-71	s	RD12M-B2
D504	8-719-101-23	s	1SS123
D505	8-719-106-16	s	RD6.8M-B1
D506	8-719-106-89	s	RD15M-B2
D507	8-719-106-08	s	RD6.2M-B2
D508	8-719-101-23	s	1SS123
D510	8-719-101-23	s	1SS123
D511	8-719-200-02	s	10E2
D512	8-719-200-02	s	10E2
D513	8-719-100-05	s	1S2837
D514	8-719-100-05	s	1S2837
D516	8-719-101-23	s	1SS123
D517	8-719-101-23	s	1SS123
D518	8-719-100-03	s	1S2835
D519	8-719-100-05	s	1S2837
D560	8-719-101-23	s	1SS123
D561	8-719-101-23	s	1SS123
FL100	1-421-865-11	s	SKEWING
FL101	1-236-003-11	s	LOW PASS 25kHz
FL200	1-421-865-11	s	SKEWING
FL300	1-236-011-11	s	LOW PASS 1MHz
FL301	1-236-012-11	s	BAND PASS 310kHz
FL302	1-236-013-11	s	BAND PASS 540kHz
FL303	1-236-014-11	s	BAND PASS
FL304	1-236-003-11	s	LOW PASS 25kHz
IC100	8-759-908-16	s	TL072CPS (TI)
IC102	8-752-031-27	s	CXA1097Q (SONY)
IC103	8-759-908-17	s	TL082CPS (TI)
IC300	8-759-403-78	s	AN3920K (MATSUSHITA)
IC301	8-759-403-77	s	AN3922NK (MATSUSHITA)
IC302	8-752-009-90	s	CX20099 (SONY)
IC303	8-759-908-16	s	TL072CPS (TI)
IC305	8-759-908-17	s	TL082CPS (TI)
IC306	8-752-011-10	s	CX20111 (SONY)
IC307	8-759-708-05	s	NJM78L05A (JRC)
IC401	8-759-403-77	s	AN3922NK (MATSUSHITA)
IC500	8-759-908-17	s	TL082CPS (TI)
IC501	8-759-700-07	s	NJM2903M (JRC)
IC502	8-759-200-67	s	TC4001BF (SONY)
IC503	8-759-908-17	s	TL082CPS (TI)
IC504	8-759-908-17	s	TL082CPS (TI)
IC505	8-759-745-64	s	NJM4560M (JRC)
IC506	8-749-901-29	s	BX1481 (SONY)
IC507	8-759-205-08	s	TC74HC86F (TOSHIBA)
IC508	8-759-205-21	s	TC74HC221F (TOSHIBA)
IC509	8-759-205-21	s	TC74HC221F (TOSHIBA)
IC510	8-759-208-11	s	TC4053BFHB (TOSHIBA)
IC511	8-759-204-95	s	TC74HC02F (TOSHIBA)
IC512	8-759-100-93	s	UPC393G2 (NEC)
IC513	8-759-205-78	s	TC504013BF (TOSHIBA)

Ref.No	Parts No.	SP	Description
J500	1-507-863-31	s	LARGE TYPE "HEADPHONES"
L300	1-410-713-21	s	CHIP 47
L301	1-410-713-21	s	CHIP 47
L302	1-410-713-21	s	CHIP 47
L303	1-410-064-11	s	MICRO 2.7MMH
L304	1-410-064-11	s	MICRO 2.7MMH
L305	1-408-417-00	s	MICRO 47
L402	1-410-713-21	s	CHIP 47
L403	1-410-713-21	s	CHIP 47
L404	1-410-713-21	s	CHIP 47
L405	1-410-713-21	s	CHIP 47
L500	1-410-713-21	s	CHIP 47
L501	1-410-713-21	s	CHIP 47
L502	1-410-713-21	s	CHIP 47
L503	1-410-713-21	s	CHIP 47
L504	1-421-329-00	s	CHOKE
L505	1-421-329-00	s	CHOKE
L506	1-421-329-00	s	CHOKE
L507	1-421-329-00	s	CHOKE
Q100	8-729-202-38	s	2SC3326N
Q101	8-729-202-38	s	2SC3326N
Q200	8-729-202-38	s	2SC3326N
Q201	8-729-202-38	s	2SC3326N
Q300	8-729-102-66	s	2SC1623
Q301	8-729-100-76	s	2SA812
Q302	8-729-202-38	s	2SC3326N
Q303	8-729-102-66	s	2SC1623
Q304	8-729-102-66	s	2SC1623
Q305	8-729-202-38	s	2SC3326N
Q306	8-729-102-66	s	2SC1623
Q307	8-729-102-66	s	2SC1623
Q308	8-729-903-00	s	DTC114TK
Q309	8-729-202-38	s	2SC3326N
Q310	8-729-102-66	s	2SC1623
Q311	8-729-100-76	s	2SA812
Q313	8-729-102-66	s	2SC1623
Q402	8-729-202-38	s	2SC3326N
Q403	8-729-102-66	s	2SC1623
Q404	8-729-102-66	s	2SC1623
Q405	8-729-202-38	s	2SC3326N
Q406	8-729-202-38	s	2SC3326N
Q500	8-729-901-02	s	DTC124XK
Q502	8-729-901-46	s	DTA114YK
Q503	8-729-100-76	s	2SA812
Q504	8-729-102-66	s	2SC1623
Q505	8-729-100-76	s	2SA812
Q506	8-729-982-22	s	2SB822
Q507	8-729-901-04	s	DTC114EK
Q508	8-729-901-05	s	DTC124EK
Q509	8-729-905-52	s	2SD1055
Q510	8-729-102-66	s	2SC1623
Q511	8-729-102-66	s	2SC1623
Q512	8-729-900-52	s	DTC114YK
Q513	8-729-102-66	s	2SC1623
Q516	8-729-102-66	s	2SC1623
Q560	8-729-202-38	s	2SC3326N
Q561	8-729-102-66	s	2SC1623
Q562	8-729-903-30	s	DTC144TK
Q563	8-729-102-66	s	2SC1623

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Ref.No	Parts No.	SP	Description
Q564	8-729-901-02	s	DTC124XK
Q565	8-729-903-29	s	DTA144TK
Q566	8-729-900-51	s	DTC114TK
Q567	8-729-901-46	s	DTA114YK
Q568	8-729-903-29	s	DTA144TK
Q569	8-729-102-66	s	2SC1623
Q570	8-729-202-38	s	2SC3326N
Q573	8-729-202-38	s	2SC3326N
Q574	8-729-901-01	s	DTC144EK
Q575	8-729-901-46	s	DTA114YK
Q576	8-729-900-52	s	DTC114YK
Q577	8-729-901-46	s	DTA114YK
Q578	8-729-900-52	s	DTC114YK
Q579	8-729-901-01	s	DTC144EK
Q580	8-729-900-51	s	DTA114TK
Q581	8-729-102-66	s	2SC1623
Q582	8-729-900-52	s	DTC114YK
Q583	8-729-100-76	s	2SA812
Q584	8-729-102-66	s	2SC1623
Q585	8-729-102-76	s	2SA812
R103	1-216-699-11	s	METAL CHIP 100k 0.5% 1/10W
R104	1-216-665-11	s	METAL CHIP 3.9k 0.5% 1/10W
R105	1-216-661-11	s	METAL CHIP 2.7k 0.5% 1/10W
R106	1-216-642-11	s	METAL CHIP 430 0.5% 1/10W
R204	1-216-665-11	s	METAL CHIP 3.9k 0.5% 1/10W
R205	1-216-661-11	s	METAL CHIP 2.7k 0.5% 1/10W
R206	1-216-642-11	s	METAL CHIP 430 0.5% 1/10W
R302	1-216-641-11	s	METAL CHIP 390 0.5% 1/10W
R303	1-216-641-11	s	METAL CHIP 390 0.5% 1/10W
R310	1-216-657-11	s	METAL CHIP 1.8k 0.5% 1/10W
R311	1-216-657-11	s	METAL CHIP 1.8k 0.5% 1/10W
R312	1-216-675-11	s	METAL CHIP 10k 0.5% 1/10W
R315	1-216-659-11	s	METAL CHIP 2.2k 0.5% 1/10W
R324	1-216-661-11	s	METAL CHIP 2.7k 0.5% 1/10W
R325	1-216-659-11	s	METAL CHIP 2.2k 0.5% 1/10W
R326	1-216-647-11	s	METAL CHIP 680 0.5% 1/10W
R327	1-216-665-11	s	METAL CHIP 3.9k 0.5% 1/10W
R328	1-216-677-11	s	METAL CHIP 12k 0.5% 1/10W
R329	1-216-663-11	s	METAL CHIP 3.3k 0.5% 1/10W
R330	1-216-661-11	s	METAL CHIP 2.7k 0.5% 1/10W
R331	1-216-663-11	s	METAL CHIP 3.3k 0.5% 1/10W
R343	1-215-470-00	s	METAL 110k 1% 1/6W
R348	1-216-620-11	s	METAL CHIP 51 0.5% 1/10W
R368	1-216-657-11	s	METAL CHIP 1.8K 0.5% 1/10W
R369	1-216-660-11	s	METAL CHIP 2.4K 0.5% 1/10W
R410	1-216-657-11	s	METAL CHIP 1.8k 0.5% 1/10W
R411	1-216-657-11	s	METAL CHIP 1.8k 0.5% 1/10W
R412	1-216-670-11	s	METAL CHIP 6.2k 0.5% 1/10W
R415	1-216-659-11	s	METAL CHIP 2.2k 0.5% 1/10W
R424	1-216-661-11	s	METAL CHIP 2.7k 0.5% 1/10W
R425	1-216-659-11	s	METAL CHIP 2.2k 0.5% 1/10W
R426	1-216-647-11	s	METAL CHIP 680 0.5% 1/10W
R427	1-216-665-11	s	METAL CHIP 3.9k 0.5% 1/10W
R428	1-216-677-11	s	METAL CHIP 12k 0.5% 1/10W
R429	1-216-663-11	s	METAL CHIP 3.3k 0.5% 1/10W
R430	1-216-661-11	s	METAL CHIP 2.7k 0.5% 1/10W
R431	1-216-663-11	s	METAL CHIP 3.3k 0.5% 1/10W
R432	1-216-669-11	s	METAL CHIP 5.6k 0.5% 1/10W
R443	1-216-699-11	s	METAL CHIP 100k 0.5% 1/10W
R543	1-216-608-11	s	METAL CHIP 16 0.5% 1/10W

Ref.No	Parts No.	SP	Description
R548	1-216-608-11	s	METAL CHIP 16 0.5% 1/10W
R550	1-216-638-11	s	METAL CHIP 300 0.5% 1/10W
R551	1-215-861-00	s	METAL OXIDE 47 5% 1W
R557	1-215-861-00	s	METAL OXIDE 47 5% 1W
R573	1-216-675-11	s	METAL CHIP 10k 0.5% 1/10W
R574	1-216-691-11	s	METAL CHIP 47k 0.5% 1/10W
R575	1-216-678-11	s	METAL CHIP 13k 0.5% 1/10W
RV100	1-237-862-11	s	VAR, CARBON 10k "AUDIO PB LEVEL CH-1"
RV200	1-237-862-11	s	VAR, CARBON 10k "AUDIO PB LEVEL CH-2"
RV301	1-230-526-11	s	VAR, METAL GLAZE 47k
RV302	1-230-528-11	s	VAR, METAL GLAZE 220k
RV303	1-230-841-11	s	VAR, METAL FILM 2k
RV304	1-230-526-11	s	VAR, METAL GLAZE 47k
RV305	1-230-526-11	s	VAR, METAL GLAZE 47k
RV306	1-237-862-11	s	VAR, CARBON 10k "AUDIO PB LEVEL CH-3"
RV307	1-230-527-11	s	VAR, METAL GLAZE 100k
RV308	1-230-523-11	s	VAR, METAL GLAZE 10k
RV403	1-230-841-11	s	VAR, METAL FILM 2k
RV404	1-230-526-11	s	VAR, METAL GLAZE 47k
RV405	1-230-526-11	s	VAR, METAL GLAZE 47k
RV406	1-237-862-11	s	VAR, CARBON 10k "AUDIO PB LEVEL CH-4"
RV500	1-230-526-11	s	VAR, METAL GLAZE 47k
RV501	1-230-522-11	s	VAR, METAL GLAZE 4.7k
RV502	1-230-524-11	s	VAR, METAL GLAZE 22k
RV503	1-237-862-11	s	VAR, CARBON 10k "HEADPHONES"
RV504	1-230-846-11	s	VAR, METAL FILM 100k
RV505	1-230-846-11	s	VAR, METAL FILM 100k
S500	1-570-845-11	s	SLIDE

CN-214 BOARD

	1-623-990-11	o	PRINTED CIRCUIT BOARD, CN-214

CN-228 BOARD

	1-623-801-11	o	PRINTED CIRCUIT BOARD, CN-228
	1-464-841-21	s	MODULATOR, RF (RFU-789) (For UC)
	1-464-842-21	s	MODULATOR, RF (RFU-788) (For J)

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

Ref.No	Parts No.	SP	Description
DL-18 BOARD			
	All of the component parts on the DL-18 board are supplied together when you order PR-104 board.		
	1-623-994-11	o	PRINTED CIRCUIT BOARD, DL-18
C2	1-124-234-00	s	ELECT 22 20% 10V
CN1	1-564-549-11	s	PIN, BOARD TO BOARD 10P
FB1	1-543-309-12	s	BEAD, FERRITE
IC1	8-752-320-38	s	CXL5002M (SONY)
Q1	8-729-216-22	s	2SA1162
Q2	8-729-216-22	s	2SA1162
RV1	1-228-475-00	s	VAR, CERMET 20k
DL-18A BOARD			
	All of the component parts on the DL-18A board are supplied together when you order PR-104 board.		
	1-623-994-11	o	PRINTED CIRCUIT BOARD, DL-18A
C2	1-124-234-00	s	ELECT 22 20% 10V
CN1	1-564-549-11	s	PIN, BOARD TO BOARD 10P
FB1	1-543-309-12	s	BEAD, FERRITE
FB2	1-543-309-12	s	BEAD, FERRITE
IC1	8-752-320-37	s	CXL5001M (SONY)
Q1	8-729-216-22	s	2SA1162
RV1	1-228-475-00	s	VAR, CERMET 20k

Ref.No	Parts No.	SP	Description
DL-19 BOARD			
	All of the component parts on the DL-19 board are supplied together when you order PR-103 board.		
	1-623-995-12	o	PRINTED CIRCUIT BOARD, DL-19
CN1	1-564-549-11	s	PIN, BOARD TO BOARD 10P
FB1	1-543-309-12	s	BEAD, FERRITE
FB2	1-543-309-12	s	BEAD, FERRITE
FL1	1-235-759-11	s	LOW PASS 5MHz
IC1	8-752-320-37	s	CXL5001M (SONY)
Q1	8-729-201-26	s	2SC2715
Q2	8-729-216-22	s	2SA1162
Q3	8-729-216-22	s	2SA1162
RV610	1-228-475-00	s	VAR, CERMET 20k
DM-64 BOARD			
	All of the component parts on the DM-64 board are supplied together when you order PR-103 board.		
	1-623-996-11	o	PRINTED CIRCUIT BOARD, DM-64
CN1	1-564-549-11	s	PIN, BOARD TO BOARD 10P
FB1	1-543-309-12	s	BEAD, FERRITE
IC1	8-759-012-00	s	MC10H116M (MOTOROLA)
IC2	8-759-011-96	s	MC10H107M (MOTOROLA)
L1	1-410-694-31	s	CHIP 1.2
R9	1-216-638-11	s	METAL CHIP 300 0.5% 1/10W
R10	1-216-638-11	s	METAL CHIP 300 0.5% 1/10W
RV608	1-228-470-00	s	VAR, CERMET 500

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

Ref.No	Parts No.	SP	Description

EQ-21 BOARD

All of the component parts on the EQ-21 board are supplied together when you order PR-103 board.

	1-623-997-12	o	PRINTED CIRCUIT BOARD, EQ-21
CN1	1-564-549-11	s	PIN, BOARD TO BOARD 10P
DL1	1-415-546-11	s	DELAY LINE 50ns
Q1	8-729-200-87	s	2SC2714
Q2	8-729-122-63	s	2SA1226
Q3	8-729-201-26	s	2SC2715
Q4	8-729-202-38	s	2SC3326N
Q5	8-729-202-38	s	2SC3326N
Q6	8-729-200-87	s	2SC2714
Q7	8-729-200-87	s	2SC2714
Q8	8-729-200-87	s	2SC2714
R5	1-216-635-00	s	METAL CHIP 220 0.5% 1/10W
RV605	1-228-471-00	s	VAR, CERMET 1k
RV606	1-228-471-00	s	VAR, CERMET 1k
RV607	1-228-474-00	s	VAR, CERMET 10k

EQ-21A BOARD

All of the component parts on the EQ-21A board are supplied together when you order PR-103 board.

	1-623-997-12	o	PRINTED CIRCUIT BOARD, EQ-21A
CN1	1-564-549-11	s	PIN, BOARD TO BOARD 10P
DL1	1-415-546-11	s	DELAY LINE 50ns
Q1	8-729-200-87	s	2SC2714
Q2	8-729-122-63	s	2SA1226
Q3	8-729-201-26	s	2SC2715
Q4	8-729-202-38	s	2SC3326N
Q5	8-729-202-38	s	2SC3326N
Q6	8-729-200-87	s	2SC2714
Q7	8-729-200-87	s	2SC2714
Q8	8-729-200-87	s	2SC2714
R5	1-216-635-00	s	METAL CHIP 220 0.5% 1/10W
RV605	1-228-471-00	s	VAR, CERMET 1k
RV606	1-228-471-00	s	VAR, CERMET 1k
RV607	1-228-474-00	s	VAR, CERMET 10k

Ref.No	Parts No.	SP	Description

FM-13 BOARD

All of the component parts on the FM-13 board are supplied together when you order PR-103 board.

	1-624-001-11	o	PRINTED CIRCUIT BOARD, FM-13
C174	1-124-224-00	s	ELECT 47 20% 6.3V
C275	1-123-647-00	s	ELECT 47 20% 6.3V
L121	1-410-713-21	s	INDUCTOR CHIP 47
L221	1-410-713-21	s	INDUCTOR CHIP 47
IC112	8-759-208-09	s	TC4052BFHB (TOSHIBA)
IC206	8-759-208-09	s	TC4052BFHB (TOSHIBA)

MT-42 BOARD

	1-623-805-12	o	PRINTED CIRCUIT BOARD, MT-42
D100	8-719-945-13	s	SLH-34YC3F
D101	8-719-945-13	s	SLH-34YC3F
ME100	1-520-495-21	s	LEVEL "LEVEL METER"
R100	1-249-408-11	s	CARBON 180 5% 1/4W
R101	1-249-408-11	s	CARBON 180 5% 1/4W
RV100	1-230-520-11	s	VAR, METAL GLAZE 1k

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

Ref.No	Parts No.	SP	Description
NR-27 BOARD			
	All of the component parts on the NR-27 board are supplied together when you order PR-104 board.		
	1-624-212-12	o	PRINTED CIRCUIT BOARD, NR-27
C6	1-135-098-21	s	TANTALUM CHIP 47 20% 6.3V
C7	1-135-098-21	s	TANTALUM CHIP 47 20% 6.3V
IC1	8-752-030-80	s	CXA1039M (SONY)
L1	1-410-694-31	s	CHIP 1.2
Q1	8-729-201-26	s	2SC2715
Q2	8-729-201-26	s	2SC2715
Q3	8-729-201-26	s	2SC2715
Q4	8-729-201-26	s	2SC2715
Q5	8-729-201-26	s	2SC2715
Q6	8-729-201-26	s	2SC2715
Q7	8-729-200-87	s	2SC2714
Q8	8-729-122-63	s	2SA1226
Q9	8-729-200-87	s	2SC2714
Q10	8-729-122-63	s	2SA1226
Q11	8-729-201-26	s	2SC2715
Q12	8-729-201-26	s	2SC2715
Q13	8-729-201-26	s	2SC2715
Q14	8-729-201-26	s	2SC2715
R5	1-216-651-11	s	METAL CHIP 1k 0.5% 1/10W
R6	1-216-661-11	s	METAL CHIP 2.7k 0.5% 1/10W
R16	1-216-643-11	s	METAL CHIP 470 0.5% 1/10W
R23	1-216-659-11	s	METAL CHIP 2.2k 0.5% 1/10W
R26	1-216-651-11	s	METAL CHIP 1k 0.5% 1/10W
R32	1-216-643-11	s	METAL CHIP 470 0.5% 1/10W
RV1	1-228-472-00	s	VAR, CERMET 2k
RV2	1-228-472-00	s	VAR, CERMET 2k
RV3	1-228-476-00	s	VAR, CERMET 50k
RV4	1-228-473-00	s	VAR, CERMET 5k
RV5	1-228-472-00	s	VAR, CERMET 2k
RV6	1-228-473-00	s	VAR, CERMET 5k
RV7	1-228-473-00	s	VAR, CERMET 5k
TH1	1-800-200-00	s	S-3K

Ref.No	Parts No.	SP	Description
PA-72 BOARD			
	All of the component parts on the PA-72 board are supplied together when you order PR-103 board.		
	1-623-998-22	o	PRINTED CIRCUIT BOARD, PA-72
CN1	1-564-549-11	s	PIN, BOARD TO BOARD 10P
IC1	8-759-112-53	s	UPC1663G (NEC)
IC2	8-759-112-53	s	UPC1663G (NEC)
RV601	1-228-474-00	s	VAR, CERMET 10k
RV602	1-228-474-00	s	VAR, CERMET 10k
PA-72A BOARD			
	All of the component parts on the PA-72A board are supplied together when you order PR-103 board.		
	1-623-998-22	o	PRINTED CIRCUIT BOARD, PA-72A
CN1	1-564-549-11	s	PIN, BOARD TO BOARD 10P
IC1	8-759-112-53	s	UPC1663G (NEC)
IC2	8-759-112-53	s	UPC1663G (NEC)
RV601	1-228-472-00	s	VAR, CERMET 2k
RV602	1-228-474-00	s	VAR, CERMET 10k

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

Ref.No	Parts No.	SP	Description
PR-103 BOARD			
	This board includes the DM-64, DL-19, EQ-21A, FM-13, PA-72, PA-72A, TG-37 and VA-69 boards.		
	A-6257-178-A	o	MOUNTED CIRCUIT BOARD, PR-103
C100	1-124-224-00	s	ELECT 47 20% 6.3V
C102	1-124-224-00	s	ELECT 47 20% 6.3V
C104	1-123-611-00	s	ELECT 1 20% 50V
C106	1-123-611-00	s	ELECT 1 20% 50V
C108	1-123-611-00	s	ELECT 1 20% 50V
C109	1-107-204-00	s	MICA 12PF 5% 500V
C110	1-107-208-00	s	MICA 18PF 5% 500V
C112	1-123-611-00	s	ELECT 1 20% 50V
C113	1-107-339-11	s	SILVERED, MICA 630.8PF
C119	1-124-224-00	s	ELECT 47 20% 6.3V
C121	1-124-224-00	s	ELECT 47 20% 6.3V
C127	1-135-093-21	s	TANTALUM CHIP 10 20% 16V
C129	1-123-611-00	s	ELECT 1 20% 50V
C130	1-123-611-00	s	ELECT 1 20% 50V
C157	1-107-075-00	s	MICA 39PF 5% 50V
C163	1-109-539-00	s	MICA 150PF 5% 50V
C164	1-107-157-00	s	MICA 27PF 5% 500V
C200	1-124-224-00	s	ELECT 47 20% 6.3V
C202	1-124-224-00	s	ELECT 47 20% 6.3V
C205	1-123-611-00	s	ELECT 1 20% 50V
C207	1-123-611-00	s	ELECT 1 20% 50V
C208	1-123-611-00	s	ELECT 1 20% 50V
C211	1-123-611-00	s	ELECT 1 20% 50V
C212	1-107-041-00	s	MICA 1.8PF 0.5PF 500V
C213	1-107-204-00	s	MICA 12PF 5% 500V
C214	1-107-204-00	s	MICA 12PF 5% 500V
C216	1-123-611-00	s	ELECT 1 20% 50V
C217	1-123-611-00	s	ELECT 1 20% 50V
C218	1-107-340-11	s	SILVERED, MICA 651.2PF
C223	1-124-224-00	s	ELECT 47 20% 6.3V
C225	1-124-224-00	s	ELECT 47 20% 6.3V
C230	1-135-093-21	s	TANTALUM CHIP 10 20% 16V
C233	1-123-611-00	s	ELECT 1 20% 50V
C234	1-123-611-00	s	ELECT 1 20% 50V
C241	1-162-882-11	s	CERAMIC 180PF 5% 50V
C242	1-162-888-11	s	CERAMIC 560PF 5% 50V
C266	1-109-539-00	s	MICA 150PF 5% 50V
C267	1-107-157-00	s	MICA 27PF 5% 500V
C285	1-135-093-21	s	TANTALUM CHIP 10 20% 16V
C288	1-135-093-21	s	TANTALUM CHIP 10 20% 16V
C309	1-124-638-11	s	ELECT 22 20% 6.3V
C310	1-124-462-00	s	ELECT 10 20% 16V
C316	1-124-462-00	s	ELECT 10 20% 16V
C319	1-124-638-11	s	ELECT 22 20% 6.3V
C320	1-124-462-00	s	ELECT 10 20% 16V
C321	1-124-462-00	s	ELECT 10 20% 16V
C331	1-161-055-00	s	CERAMIC 0.022 10% 50V
C602	1-124-462-00	s	ELECT 100 10% 16V
C605	1-124-465-00	s	ELECT 0.47 20% 50V
C608	1-124-638-11	s	ELECT 22 20% 10V
C612	1-124-462-00	s	ELECT 10 20% 16V
C615	1-124-462-00	s	ELECT 10 20% 16V
C617	1-124-638-11	s	ELECT 22 20% 6.3V
C640	1-124-224-00	s	ELECT 47 20% 6.3V
C651	1-123-611-00	s	ELECT 1 20% 50V

Ref.No	Parts No.	SP	Description
C900	1-124-224-00	s	ELECT 47 20% 6.3V
C902	1-124-224-00	s	ELECT 47 20% 6.3V
C908	1-124-224-00	s	ELECT 47 20% 6.3V
C912	1-124-224-00	s	ELECT 47 20% 6.3V
D201	8-719-101-23	s	1SS123
D600	8-719-100-03	s	1S2835
D601	8-719-101-23	s	1SS123
D602	8-719-106-16	s	RD6.8M-B1
D604	8-719-101-23	s	1SS123
D605	8-719-101-23	s	1SS123
D606	8-719-100-05	s	1S2837
D800	8-719-101-23	s	1SS123
D900	8-719-106-16	s	RD6.8M-B1
FL100	1-236-007-11	s	LOW PASS 4.5MHz
FL200	1-235-284-00	s	LOW PASS (C)
FL300	1-235-757-11	s	LOW PASS
IC100	8-759-208-09	s	TC4052BFHB (TOSHIBA)
IC101	1-464-602-11	s	CIRCUIT UNIT, HF
IC104	8-759-200-79	s	TC4049BF (TOSHIBA)
IC105	8-759-207-74	s	TC4030BFHB (TOSHIBA)
IC107	8-720-002-92	s	TX-429M (SONY)
IC108	8-759-969-13	s	SN16913P (TI)
IC109	8-759-908-17	s	TL082CPS (TI)
IC110	8-759-700-95	s	NJM1496M (JRC)
IC111	8-759-105-49	s	UPC319G2 (NEC)
IC200	8-759-100-97	s	UPC339G2 (NEC)
IC201	8-759-941-17	s	SN74LS06NS (TI)
IC202	8-752-015-81	s	CX20158 (SONY)
IC203	8-759-208-09	s	TC4052BFHB (TOSHIBA)
IC204	1-464-602-11	s	CIRCUIT UNIT, HF
IC208	8-720-002-92	s	TX-429M (SONY)
IC209	8-759-969-13	s	SN16913P (TI)
IC210	8-759-908-17	s	TL082CPS (TI)
IC211	8-759-700-95	s	NJM1496M (JRC)
IC212	8-759-105-49	s	UPC319G2 (NEC)
IC214	8-759-100-93	s	UPC393G2 (NEC)
IC215	8-759-925-82	s	SN74HC21NS (TI)
IC216	8-759-204-94	s	TC74HC00F (TOSHIBA)
IC217	8-759-115-55	s	UPC1555C (NEC)
IC218	8-759-115-55	s	UPC1555C (NEC)
IC303	8-752-320-37	s	CXL5001M (SONY)
IC304	8-752-320-37	s	CXL5001M (SONY)
IC305	8-752-320-37	s	CXL5001M (SONY)
IC306	8-759-208-11	s	TC4053BFHB (TOSHIBA)
IC600	8-759-201-47	s	TA7357AP (TOSHIBA)
IC601	8-759-907-81	s	SN74LS221NS (TI)
IC602	8-759-908-92	s	TL084CNS (TI)
IC603	8-759-100-93	s	UPC393G2 (NEC)
IC604	8-759-205-01	s	TC74HC20F (TOSHIBA)
IC605	1-464-605-11	s	CIRCUIT UNIT, ED
IC606	8-759-200-90	s	TC4538BF (TOSHIBA)
IC607	8-759-204-94	s	TC74HC00F (TOSHIBA)
IC608	8-759-205-06	s	TC74HC74F (TOSHIBA)
IC609	8-759-907-81	s	SN74LS221NS (TI)

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

Ref.No	Parts No.	SP	Description
IC610	8-757-993-00	s	CX-7993A (SONY)
IC611	8-759-207-74	s	TC4030BFHB (TOSHIBA)
IC612	8-759-920-14	s	S-8053ALR (SEIKO I and E)
IC613	8-759-204-94	s	TC74HC00F (TOSHIBA)
IC614	8-759-204-94	s	TC74HC00F (TOSHIBA)
IC615	8-759-205-21	s	TC74HC221F (TOSHIBA)
L100	1-410-713-21	s	CHIP 47
L101	1-410-713-21	s	CHIP 47
L102	1-410-713-21	s	CHIP 47
L103	1-410-713-21	s	CHIP 47
L105	1-410-713-21	s	CHIP 47
L106	1-410-707-21	s	CHIP 15
L107	1-410-701-31	s	CHIP 4.7
L108	1-410-707-21	s	CHIP 15
L109	1-410-713-21	s	CHIP 47
L110	1-410-713-21	s	CHIP 47
L111	1-410-713-21	s	CHIP 47
L113	1-410-713-21	s	CHIP 47
L114	1-410-713-21	s	CHIP 47
L115	1-410-713-21	s	CHIP 47
L116	1-410-701-31	s	CHIP 4.7
L117	1-410-718-31	s	CHIP 120
L118	1-410-718-31	s	CHIP 120
L119	1-410-713-21	s	CHIP 47
L120	1-410-713-21	s	CHIP 47
L200	1-410-713-21	s	CHIP 47
L201	1-410-713-21	s	CHIP 47
L202	1-410-713-21	s	CHIP 47
L203	1-410-713-21	s	CHIP 47
L204	1-410-713-21	s	CHIP 47
L206	1-410-713-21	s	CHIP 47
L207	1-410-708-31	s	CHIP 18
L208	1-410-709-21	s	CHIP 22
L209	1-410-713-21	s	CHIP 47
L210	1-410-713-21	s	CHIP 47
L211	1-410-713-21	s	CHIP 47
L212	1-410-713-21	s	CHIP 47
L213	1-410-713-21	s	CHIP 47
L214	1-410-725-21	s	CHIP 470
L215	1-410-725-21	s	CHIP 470
L216	1-410-704-21	s	CHIP 8.2
L217	1-410-718-31	s	CHIP 120
L218	1-410-718-31	s	CHIP 120
L219	1-410-713-21	s	CHIP 47
L220	1-410-713-21	s	CHIP 47
L300	1-410-706-31	s	CHIP 12
L301	1-410-713-21	s	CHIP 47
L302	1-410-713-21	s	CHIP 47
L303	1-410-713-21	s	CHIP 47
L304	1-410-713-21	s	CHIP 47
L305	1-410-713-21	s	CHIP 47
L306	1-410-713-21	s	CHIP 47
L307	1-410-713-21	s	CHIP 47
L308	1-410-713-21	s	CHIP 47
L309	1-410-713-21	s	CHIP 47
L310	1-410-713-21	s	CHIP 47

Ref.No	Parts No.	SP	Description
L600	1-410-713-21	s	CHIP 47
L601	1-410-713-21	s	CHIP 47
L602	1-410-713-21	s	CHIP 47
L603	1-410-713-21	s	CHIP 47
L604	1-410-713-21	s	CHIP 47
L605	1-410-713-21	s	CHIP 47
L606	1-410-713-21	s	CHIP 47
L900	1-421-329-00	s	CHOKE
L901	1-421-329-00	s	CHOKE
L902	1-421-329-00	s	CHOKE
Q100	8-729-201-26	s	2SC2715
Q101	8-729-202-38	s	2SC3326N
Q103	8-729-202-38	s	2SC3326N
Q104	8-729-201-26	s	2SC2715
Q105	8-729-122-63	s	2SA1226
Q106	8-729-122-63	s	2SA1226
Q107	8-729-122-63	s	2SA1226
Q108	8-729-201-26	s	2SC2715
Q109	8-729-201-26	s	2SC2715
Q110	8-729-201-26	s	2SC2715
Q112	8-729-122-63	s	2SA1226
Q113	8-729-201-26	s	2SC2715
Q114	8-729-201-26	s	2SC2715
Q115	8-729-122-63	s	2SA1226
Q116	8-729-122-63	s	2SA1226
Q117	8-729-271-23	s	2SC2712
Q118	8-729-271-23	s	2SC2712
Q119	8-729-122-63	s	2SA1226
Q120	8-729-271-23	s	2SC2712
Q121	8-729-271-23	s	2SC2712
Q122	8-729-271-23	s	2SC2712
Q123	8-729-202-38	s	2SC3326N
Q203	8-729-201-26	s	2SC2715
Q205	8-729-122-63	s	2SA1226
Q206	8-729-122-63	s	2SA1226
Q207	8-729-122-63	s	2SA1226
Q208	8-729-201-26	s	2SC2715
Q209	8-729-201-26	s	2SC2715
Q210	8-729-201-26	s	2SC2715
Q211	8-729-201-26	s	2SC2715
Q212	8-729-122-63	s	2SA1226
Q213	8-729-201-26	s	2SC2715
Q214	8-729-201-26	s	2SC2715
Q216	8-729-122-63	s	2SA1226
Q217	8-729-122-63	s	2SA1226
Q218	8-729-271-23	s	2SC2712
Q219	8-729-271-23	s	2SC2712
Q220	8-729-122-63	s	2SA1226
Q221	8-729-271-23	s	2SC2712

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

Ref.No	Parts No.	SP	Description
Q222	8-729-271-23	s	2SC2712
Q223	8-729-271-23	s	2SC2712
Q224	8-729-202-38	s	2SC3326N
Q300	8-729-271-23	s	2SC2712
Q301	8-729-271-23	s	2SC2712
Q302	8-729-271-23	s	2SC2712
Q303	8-729-109-44	s	2SK94
Q304	8-729-102-66	s	2SC1623
Q306	8-729-100-76	s	2SA812
Q307	8-729-100-76	s	2SA812
Q308	8-729-100-76	s	2SA812
Q309	8-729-100-76	s	2SA812
Q310	8-729-122-63	s	2SA1226
Q600	8-729-109-44	s	2SK94
Q601	8-729-122-63	s	2SA1226
Q602	8-729-901-01	s	DTC144EK
Q603	8-729-201-26	s	2SC2715
Q605	8-729-901-01	s	DTC144EK
Q606	8-729-901-01	s	DTC144EK
Q900	8-729-982-22	s	2SB822
Q901	8-729-201-26	s	2SC2715
Q902	8-729-905-52	s	2SD1055
Q903	8-729-201-26	s	2SC2715
Q904	8-729-905-52	s	2SD1055
R106	1-216-638-11	s	METAL CHIP 300 0.5% 1/10W
R113	1-216-643-11	s	METAL CHIP 470 0.5% 1/10W
R119	1-216-631-11	s	METAL CHIP 150 0.5% 1/10W
R120	1-218-178-11	s	METAL CHIP 1k 0.1% 1/16W
R121	1-218-176-11	s	METAL CHIP 289 0.1% 1/16W
R126	1-216-643-11	s	METAL CHIP 470 0.5% 1/10W
R128	1-216-643-11	s	METAL CHIP 470 0.5% 1/10W
R131	1-216-683-11	s	METAL CHIP 22k 0.5% 1/10W
R135	1-216-626-11	s	METAL CHIP 91 0.5% 1/10W
R136	1-216-649-11	s	METAL CHIP 820 0.5% 1/10W
R137	1-216-671-11	s	METAL CHIP 6.8k 1% 1/10W
R146	1-216-675-11	s	METAL CHIP 10k 0.5% 1/10W
R147	1-216-675-11	s	METAL CHIP 10k 0.5% 1/10W
R156	1-216-651-11	s	METAL CHIP 1k 0.5% 1/10W
R157	1-216-687-11	s	METAL CHIP 33k 0.5% 1/10W
R162	1-216-643-11	s	METAL CHIP 470 0.5% 1/10W
R163	1-216-651-11	s	METAL CHIP 1k 0.5% 1/10W
R164	1-216-651-11	s	METAL CHIP 1k 0.5% 1/10W
R165	1-216-649-11	s	METAL CHIP 820 0.5% 1/10W
R172	1-216-659-11	s	METAL CHIP 2.2k 0.5% 1/10W
R173	1-216-659-11	s	METAL CHIP 2.2k 0.5% 1/10W
R174	1-216-667-11	s	METAL CHIP 4.7k 0.5% 1/10W
R175	1-216-663-11	s	METAL CHIP 3.3k 0.5% 1/10W
R176	1-216-667-11	s	METAL CHIP 4.7k 0.5% 1/10W
R177	1-216-663-11	s	METAL CHIP 3.3k 0.5% 1/10W
R178	1-216-643-11	s	METAL CHIP 470 0.5% 1/10W
R187	1-216-683-11	s	METAL CHIP 22k 0.5% 1/10W
R188	1-216-669-11	s	METAL CHIP 5.6k 0.5% 1/10W
R228	1-216-643-11	s	METAL CHIP 470 0.5% 1/10W
R233	1-216-631-11	s	METAL CHIP 150 0.5% 1/10W
R234	1-218-177-11	s	METAL CHIP 1k 0.1% 1/6W
R235	1-218-175-11	s	METAL CHIP 267 0.1% 1/16W
R240	1-216-651-11	s	METAL CHIP 1k 0.5% 1/10W
R242	1-216-651-11	s	METAL CHIP 1k 0.5% 1/10W
R261	1-216-675-11	s	METAL CHIP 10k 0.5% 1/10W

Ref.No	Parts No.	SP	Description
R262	1-216-675-11	s	METAL CHIP 10k 0.5% 1/10W
R271	1-216-651-11	s	METAL CHIP 1k 0.5% 1/10W
R272	1-216-687-11	s	METAL CHIP 33k 0.5% 1/10W
R277	1-216-645-11	s	METAL CHIP 560 0.5% 1/10W
R278	1-216-651-11	s	METAL CHIP 1k 0.5% 1/10W
R279	1-216-651-11	s	METAL CHIP 1k 0.5% 1/10W
R280	1-216-643-11	s	METAL CHIP 470 0.5% 1/10W
R287	1-216-659-11	s	METAL CHIP 2.2k 0.5% 1/10W
R288	1-216-659-11	s	METAL CHIP 2.2k 0.5% 1/10W
R289	1-216-667-11	s	METAL CHIP 4.7k 0.5% 1/10W
R290	1-216-663-11	s	METAL CHIP 3.3k 0.5% 1/10W
R291	1-216-667-11	s	METAL CHIP 4.7k 0.5% 1/10W
R292	1-216-663-11	s	METAL CHIP 3.3k 0.5% 1/10W
R302	1-216-683-11	s	METAL CHIP 22k 0.5% 1/10W
R303	1-216-669-11	s	METAL CHIP 5.6k 0.5% 1/10W
R626	1-216-667-11	s	METAL CHIP 4.7k 0.5% 1/10W
RV102	1-230-523-11	s	VAR, METAL GLAZE 10k
RV103	1-230-526-11	s	VAR, METAL GLAZE 47k
RV104	1-230-521-11	s	VAR, METAL GLAZE 2.2k
RV106	1-230-523-11	s	VAR, METAL GLAZE 10k
RV108	1-230-523-11	s	VAR, METAL GLAZE 10k
RV200	1-230-520-11	s	VAR, METAL GLAZE 1k
RV201	1-230-523-11	s	VAR, METAL GLAZE 10k
RV202	1-230-526-11	s	VAR, METAL GLAZE 47k
RV203	1-230-521-11	s	VAR, METAL GLAZE 2.2k
RV204	1-230-523-11	s	VAR, METAL GLAZE 10k
RV206	1-230-523-11	s	VAR, METAL GLAZE 10k
RV300	1-230-521-11	s	VAR, METAL GLAZE 2.2k
RV308	1-230-524-11	s	VAR, METAL GLAZE 22k
RV309	1-230-524-11	s	VAR, METAL GLAZE 22k
RV310	1-230-524-11	s	VAR, METAL GLAZE 22k
RV600	1-230-524-11	s	VAR, METAL GLAZE 22k
RV601	1-230-524-11	s	VAR, METAL GLAZE 22k
TH100	1-800-200-00	s	S-3K
X600	1-567-864-11	s	CRYSTAL 10.738635 MHz

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

Ref.No	Parts No.	SP	Description
PR-104 BOARD			
	This board includes the DL-18, DL-18A and NR-27 boards.		
	A-6257-179-A	o	MOUNTED CIRCUIT BOARD, PR-104
C112	1-124-638-11	s	ELECT 22 20% 6.3V
C113	1-124-638-11	s	ELECT 22 20% 6.3V
C115	1-124-638-11	s	ELECT 22 20% 6.3V
C116	1-124-638-11	s	ELECT 22 20% 6.3V
C135	1-124-462-00	s	ELECT 10 20% 16V
C138	1-124-638-11	s	ELECT 22 20% 6.3V
C140	1-124-638-11	s	ELECT 22 20% 6.3V
C143	1-124-462-00	s	ELECT 10 20% 16V
C144	1-162-637-11	s	CERAMIC CHIP 0.47 16V
C153	1-124-462-00	s	ELECT 10 20% 16V
C200	1-123-638-11	s	ELECT 22 20% 6.3V
C208	1-135-099-00	s	TANTALUM CHIP 2.2 20% 6.3V
C209	1-135-099-00	s	TANTALUM CHIP 2.2 20% 6.3V
C212	1-124-638-11	s	ELECT 22 20% 10V
C215	1-124-638-11	s	ELECT 22 20% 6.3V
C221	1-135-099-00	s	TANTALUM CHIP 22 20% 6.3V
C222	1-135-099-00	s	TANTALUM CHIP 22 20% 6.3V
C317	1-124-443-00	s	ELECT 100 20% 6.3V
C322	1-123-611-00	s	ELECT 1 20% 50V
C323	1-124-224-00	s	ELECT 47 20% 6.3V
C332	1-124-224-00	s	ELECT 47 20% 6.3V
C339	1-124-638-11	s	ELECT 22 20% 6.3V
C400	1-124-462-00	s	ELECT 10 20% 16V
C401	1-123-611-00	s	ELECT 1 20% 50V
C402	1-124-224-00	s	ELECT 47 20% 6.3V
C403	1-124-224-00	s	ELECT 47 20% 6.3V
C406	1-123-611-00	s	ELECT 1 20% 50V
C407	1-124-224-00	s	ELECT 47 20% 6.3V
C409	1-124-224-00	s	ELECT 47 20% 6.3V
C411	1-124-224-00	s	ELECT 47 20% 6.3V
C412	1-124-224-00	s	ELECT 47 20% 6.3V
C424	1-162-878-11	s	CERAMIC 91PF 5% 50V
C429	1-124-224-00	s	ELECT 47 20% 6.3V
C430	1-124-224-00	s	ELECT 47 20% 6.3V
C432	1-124-224-00	s	ELECT 47 20% 6.3V
C440	1-124-224-00	s	ELECT 47 20% 6.3V
C446	1-124-224-00	s	ELECT 47 20% 6.3V
C447	1-124-224-00	s	ELECT 47 20% 6.3V
C501	1-124-638-11	s	ELECT 22 20% 6.3V
C517	1-124-638-11	s	ELECT 22 20% 10V
C519	1-124-638-11	s	ELECT 22 20% 6.3V
C524	1-124-638-11	s	ELECT 22 20% 6.3V
C533	1-124-638-11	s	ELECT 22 20% 10V
C535	1-124-638-11	s	ELECT 22 20% 6.3V
C605	1-124-224-00	s	ELECT 47 20% 6.3V
C609	1-124-224-00	s	ELECT 47 20% 6.3V
C614	1-162-890-11	s	CERAMIC 820PF 5% 50V
C617	1-162-890-11	s	CERAMIC 820PF 5% 50V
C904	1-124-224-00	s	ELECT 47 20% 6.3V
C906	1-124-224-00	s	ELECT 47 20% 6.3V
C910	1-124-224-00	s	ELECT 47 20% 6.3V
C912	1-124-224-00	s	ELECT 47 20% 6.3V

Ref.No	Parts No.	SP	Description
CV400	1-141-260-00	s	TRIMAR, CERAMIC
D100	8-719-105-52	s	RD3.6M-B2
D101	8-719-101-23	s	1SS123
D102	8-719-101-23	s	1SS123
D103	8-719-101-23	s	1SS123
D200	8-719-101-23	s	1SS123
D201	8-719-101-23	s	1SS123
D400	8-719-101-23	s	1SS123
D900	8-719-106-16	s	RD6.8M-B1
DL300	1-415-339-00	s	DELAY LINE 300ns
FL100	1-235-322-11	s	LOW PASS (LPF-B)
FL300	1-236-057-11	s	LOW PASS
FL400	1-235-161-00	s	BAND PASS
FL600	1-235-321-11	s	LOW PASS (LPF-A)
FL601	1-235-321-11	s	LOW PASS (LPF-A)
IC100	8-759-208-09	s	TC4052BFHB (TOSHIBA)
IC102	8-759-201-47	s	TA7357AP (TOSHIBA)
IC103	8-759-105-49	s	UPC319G2 (NEC)
IC104	8-759-205-06	s	TC74HC74F (TOSHIBA)
IC105	8-759-908-17	s	TL082CPS (TI)
IC106	8-759-907-81	s	SN74LS221NS (TI)
IC200	8-759-907-81	s	SN74LS221NS (TI)
IC201	8-759-902-88	s	SN74LS123NS (TI)
IC202	8-749-901-21	s	BX1461 (SONY)
IC203	8-759-908-92	s	TL084CNS (TI)
IC204	8-759-931-43	s	SN74LS624NS (TI)
IC301	8-752-015-81	s	CX20158 (SONY)
IC302	8-759-208-11	s	TC4053BFHB (TOSHIBA)
IC304	8-752-015-81	s	CX20158 (SONY)
IC400	8-759-908-17	s	TL082CPS (TI)
IC401	8-759-208-11	s	TC4053BFHB (TOSHIBA)
IC402	8-759-908-92	s	TL084CNS (TI)
IC403	8-759-204-94	s	TC74HC00F (TOSHIBA)
IC404	8-759-906-59	s	CX22017 (SONY)
IC406	1-464-601-11	s	CIRCUIT UNIT, VA
IC500	8-759-907-81	s	SN74LS221NS (TI)
IC501	8-759-907-81	s	SN74LS221NS (TI)
IC502	8-759-907-81	s	SN74LS221NS (TI)
IC503	8-759-907-81	s	SN74LS221NS (TI)
IC504	8-759-204-94	s	TC74HC00F (TOSHIBA)
IC505	8-749-901-21	s	BX1461 (SONY)
IC506	8-759-908-17	s	TL082CPS (TI)
IC507	1-464-608-11	s	CIRCUIT UNIT, VCO
IC508	8-759-922-29	s	CX23084 (SONY)
IC509	8-759-907-81	s	SN74LS221NS (TI)
IC510	8-759-907-81	s	SN74LS221NS (TI)
IC511	8-749-901-21	s	BX1461 (SONY)
IC512	1-464-608-11	s	CIRCUIT UNIT, VCO
IC513	8-759-204-94	s	TC74HC00F (TOSHIBA)
IC600	8-759-208-09	s	TC4052BFHB (TOSHIBA)
IC601	1-808-038-11	s	BS-6336
IC900	8-759-708-02	s	NJM78L02A (JRC)
IC901	8-759-700-64	s	NJM79L03A (JRC)

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Ref.No	Parts No.	SP	Description
L100	1-410-713-21	s	CHIP 47
L101	1-410-713-21	s	CHIP 47
L102	1-410-706-31	s	CHIP 12
L103	1-410-714-31	s	CHIP 56
L106	1-410-713-21	s	CHIP 47
L107	1-410-713-21	s	CHIP 47
L108	1-410-713-21	s	CHIP 47
L109	1-410-718-31	s	CHIP 120
L110	1-410-721-21	s	CHIP 220
L200	1-410-713-21	s	CHIP 47
L201	1-410-713-21	s	CHIP 47
L202	1-410-713-21	s	CHIP 47
L203	1-410-713-21	s	CHIP 47
L301	1-410-713-21	s	CHIP 47
L302	1-410-713-21	s	CHIP 47
L303	1-410-713-21	s	CHIP 47
L304	1-410-713-21	s	CHIP 47
L305	1-410-713-21	s	CHIP 47
L306	1-410-713-21	s	CHIP 47
L307	1-410-713-21	s	CHIP 47
L400	1-410-713-21	s	CHIP 47
L401	1-410-713-21	s	CHIP 47
L402	1-410-713-21	s	CHIP 47
L403	1-410-713-21	s	CHIP 47
L404	1-410-713-21	s	CHIP 47
L405	1-410-713-21	s	CHIP 47
L406	1-410-713-21	s	CHIP 47
L407	1-410-713-21	s	CHIP 47
L408	1-410-713-21	s	CHIP 47
L409	1-410-713-21	s	CHIP 47
L410	1-410-713-21	s	CHIP 47
L411	1-410-713-21	s	CHIP 47
L412	1-410-713-21	s	CHIP 47
L500	1-410-713-21	s	CHIP 47
L501	1-410-713-21	s	CHIP 47
L502	1-410-713-21	s	CHIP 47
L503	1-410-713-21	s	CHIP 47
L504	1-410-713-21	s	CHIP 47
L505	1-410-713-21	s	CHIP 47
L600	1-410-713-21	s	CHIP 47
L601	1-410-713-21	s	CHIP 47
L602	1-410-713-21	s	CHIP 47
L900	1-421-329-00	s	CHOKE
L901	1-421-329-00	s	CHOKE
L902	1-421-329-00	s	CHOKE
LV400	1-407-926-00	s	VAR 22

Ref.No	Parts No.	SP	Description
Q100	8-729-271-23	s	2SC2712
Q101	8-729-271-23	s	2SC2712
Q102	8-729-216-22	s	2SA1162
Q103	8-729-271-23	s	2SC2712
Q104	8-729-271-23	s	2SC2712
Q105	8-729-271-23	s	2SC2712
Q119	8-729-271-23	s	2SC2712
Q120	8-729-216-22	s	2SA1162
Q121	8-729-216-22	s	2SA1162
Q122	8-729-200-87	s	2SC2714
Q200	8-729-271-23	s	2SC2712
Q201	8-729-216-22	s	2SA1162
Q202	8-729-271-23	s	2SC2712
Q203	8-729-216-22	s	2SA1162
Q313	8-729-100-66	s	2SC1623
Q314	8-729-100-66	s	2SC1623
Q315	8-729-100-66	s	2SC1623
Q316	8-729-100-66	s	2SC1623
Q317	8-729-100-66	s	2SC1623
Q318	8-729-100-66	s	2SC1623
Q319	8-729-100-66	s	2SC1623
Q320	8-729-100-66	s	2SC1623
Q321	8-729-109-44	s	2SK94
Q322	8-729-200-87	s	2SC2714
Q323	8-729-216-22	s	2SA1162
Q324	8-729-201-26	s	2SC2715
Q400	8-729-100-76	s	2SA812
Q401	8-729-109-44	s	2SK94
Q402	8-729-100-66	s	2SC1623
Q403	8-729-100-76	s	2SA812
Q404	8-729-109-44	s	2SK94
Q405	8-729-100-66	s	2SC1623
Q406	8-729-100-76	s	2SA812
Q407	8-729-100-66	s	2SC1623
Q408	8-729-201-26	s	2SC2715
Q409	8-729-201-26	s	2SC2715
Q410	8-729-201-26	s	2SC2715
Q411	8-729-100-66	s	2SC1623
Q412	8-729-100-66	s	2SC1623
Q413	8-729-100-66	s	2SC1623
Q414	8-729-100-66	s	2SC1623
Q415	8-729-100-66	s	2SC1623
Q416	8-729-100-66	s	2SC1623
Q417	8-729-100-66	s	2SC1623
Q600	8-729-216-22	s	2SA1162
Q601	8-729-109-44	s	2SK94
Q602	8-729-271-23	s	2SC2712
Q603	8-729-216-22	s	2SA1162
Q604	8-729-109-44	s	2SK94
Q605	8-729-271-23	s	2SC2712
Q606	8-729-216-22	s	2SA1162
Q900	8-729-982-22	s	2SB822
Q901	8-729-201-26	s	2SC2715
Q902	8-729-905-52	s	2SD1055
Q903	8-729-201-26	s	2SC2715
Q904	8-729-905-52	s	2SD1055

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Ref.No	Parts No.	SP	Description
R111	1-216-643-11	s	METAL CHIP 470 0.5% 1/10W
R112	1-216-643-11	s	METAL CHIP 470 0.5% 1/10W
R168	1-215-443-00	s	METAL FILM 8.2k 1% 1/6W
R173	1-215-433-00	s	METAL FILM 3.3k 1% 1/6W
R200	1-216-674-11	s	METAL CHIP 9.1k 0.5% 1/10W
R203	1-216-672-11	s	METAL CHIP 7.5k 0.5% 1/10W
R206	1-216-663-11	s	METAL CHIP 3.3k 0.5% 1/10W
R326	1-216-651-11	s	METAL CHIP 1k 0.5% 1/10W
R340	1-216-640-11	s	METAL CHIP 360 0.5% 1/10W
R358	1-216-624-11	s	METAL CHIP 75 0.5% 1/10W
R424	1-216-624-11	s	METAL CHIP 75 0.5% 1/10W
R457	1-216-624-11	s	METAL CHIP 75 0.5% 1/10W
R458	1-216-624-11	s	METAL CHIP 75 0.5% 1/10W
R459	1-216-624-11	s	METAL CHIP 75 0.5% 1/10W
R504	1-216-668-11	s	METAL CHIP 5.1k 0.5% 1/10W
R508	1-216-667-11	s	METAL CHIP 4.7k 0.5% 1/10W
R518	1-216-667-11	s	METAL CHIP 4.7k 0.5% 1/10W
R610	1-216-643-11	s	METAL CHIP 470 0.5% 1/10W
R612	1-216-643-11	s	METAL CHIP 470 0.5% 1/10W
R620	1-216-643-11	s	METAL CHIP 470 0.5% 1/10W
R622	1-216-643-11	s	METAL CHIP 470 0.5% 1/10W
RV100	1-230-520-11	s	VAR, METAL GLAZE 1k
RV108	1-230-523-11	s	VAR, METAL GLAZE 10k
RV200	1-230-522-11	s	VAR, METAL GLAZE 4.7k
RV201	1-230-522-11	s	VAR, METAL GLAZE 4.7k
RV202	1-230-522-11	s	VAR, METAL GLAZE 4.7k
RV307	1-230-521-11	s	VAR, METAL GLAZE 2.2k
RV308	1-230-519-11	s	VAR, METAL GLAZE 470
RV309	1-230-520-11	s	VAR, METAL GLAZE 1k
RV400	1-230-521-11	s	VAR, METAL GLAZE 2.2k
RV401	1-230-523-11	s	VAR, METAL GLAZE 10k
RV402	1-230-523-11	s	VAR, METAL GLAZE 10k
RV403	1-230-523-11	s	VAR, METAL GLAZE 10k
RV404	1-230-523-11	s	VAR, METAL GLAZE 10k
RV406	1-230-520-11	s	VAR, METAL GLAZE 1k
RV407	1-230-522-11	s	VAR, METAL GLAZE 4.7k
RV408	1-230-521-11	s	VAR, METAL GLAZE 2.2k
RV409	1-230-522-11	s	VAR, METAL GLAZE 4.7k
RV410	1-230-521-11	s	VAR, METAL GLAZE 2.2k
RV411	1-230-520-11	s	VAR, METAL GLAZE 1k
RV500	1-230-521-11	s	VAR, METAL GLAZE 2.2k
RV501	1-230-523-11	s	VAR, METAL GLAZE 10k
RV502	1-230-523-11	s	VAR, METAL GLAZE 10k
RV600	1-230-520-11	s	VAR, METAL GLAZE 1k
RV601	1-230-520-11	s	VAR, METAL GLAZE 1k
RV602	1-230-520-11	s	VAR, METAL GLAZE 1k
RV605	1-230-520-11	s	VAR, METAL GLAZE 1k
TH100	1-800-200-00	s	S-3K
TH600	1-800-200-00	s	S-3K
TH601	1-800-200-00	s	S-3K
X400	1-567-859-11	s	CRYSTAL 3.57945 MHz
X500	1-567-864-11	s	CRYSTAL 10.738635 MHz

Ref.No	Parts No.	SP	Description
SW-234 BOARD			
	1-623-802-11	o	PRINTED CIRCUIT BOARD, SW-234
R101	1-249-433-11	s	CARBON 22k 5% 1/4W
R102	1-249-433-11	s	CARBON 22k 5% 1/4W
R103	1-249-433-11	s	CARBON 22k 5% 1/4W
R104	1-249-433-11	s	CARBON 22k 5% 1/4W
S101	1-570-845-11	s	SLIDE "AUDIO PB LEVEL CH-1 ON/OFF"
S102	1-570-845-11	s	SLIDE "AUDIO PB LEVEL CH-2 ON/OFF"
S103	1-570-845-11	s	SLIDE "AUDIO PB LEVEL CH-3 ON/OFF"
S104	1-570-845-11	s	SLIDE "AUDIO PB LEVEL CH-4 ON/OFF"
SW-235 BOARD			
	1-623-806-11	o	PRINTED CIRCUIT BOARD, SW-235
R103	1-249-429-11	s	CARBON 10k 5% 1/4W
S100	1-570-845-11	s	SLIDE "LIGHT"
S105	1-552-539-00	s	KEY BOARD "BATT CHECK"
SW-243 BOARD			
	1-623-804-11	o	PRINTED CIRCUIT BOARD, SW-243
	1-562-260-21	o	CONTACT, SOCKET
S900	1-553-629-00	s	TOGGLE "POWER"
SW-244 BOARD			
	1-623-803-11	o	PRINTED CIRCUIT BOARD, SW-244
S106	1-570-845-11	s	SLIDE "DOLBY NR ON/OFF"

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

Ref.No	Parts No.	SP	Description
SW-255 BOARD			
	1-623-989-11	o	PRINTED CIRCUIT BOARD, SW-255
S901	1-554-481-00	s	SLIDE "75 ohm ON/OFF"
TG-37 BOARD			
	All of the component parts on the TG-37 board are supplied together when you order PR-103 board.		
	1-624-002-11	s	PRINTED CIRCUIT BOARD, TG-37
IC106	8-759-200-90	s	TC4538BF (TOSHIBA)
IC202	8-759-204-94	s	TC74HC00F (TOSHIBA)
IC207	8-759-205-78	s	TC504013BF (TOSHIBA)
IC213	8-759-205-78	s	TC504013BF (TOSHIBA)
IC301	8-759-205-21	s	TC74HC221F (TOSHIBA)
IC302	8-759-207-25	s	TC74HC163F (TOSHIBA)
RV105	1-228-476-00	s	VAR, CERMET 50k
RV602	1-228-476-00	s	VAR, CERMET 50k

Ref.No	Parts No.	SP	Description
VA-69 BOARD			
	All of the component parts on the VA-69 board are supplied together when you order PR-103 board.		
	1-623-999-11	s	PRINTED CIRCUIT BOARD, VA-69
C3	1-135-093-21	s	TANTALUM CHIP 10 10% 16V
C4	1-135-093-21	s	TANTALUM CHIP 10 10% 16V
CN1	1-564-549-11	s	PIN, BOARD TO BOARD 10P
D1	8-719-101-23	s	1SS123
IC1	8-759-923-63	s	TL592PS (TI)
IC2	8-752-015-81	s	CX20158 (SONY)
Q1	8-729-201-26	s	2SC2715
Q2	8-729-201-26	s	2SC2715
Q3	8-729-201-26	s	2SC2715
Q4	8-729-201-26	s	2SC2715
RV609	1-228-472-00	s	VAR, CERMET 2k
DC-DC CONVERTER			
	1-464-867-11	s	CONVERTER UNIT, DC-DC (CD-73K)
	A-4930-060-A	o	CD-73K S BOARD ASSY
	1-623-107-11	o	PRINTED CIRCUIT BOARD, PK-73M
	2-434-448-01	s	SCREW 2.6 x5
	2-431-741-01	s	SHEET, INSULATING
C1	1-127-531-11	s	ELECT (SOLID) 33 20% 20V
C2	1-124-946-11	s	ELECT 100 20% 25V
C3	1-124-946-11	s	ELECT 100 20% 25V
C4	1-127-531-11	s	ELECT (SOLID) 33 20% 20V
C5	1-127-531-11	s	ELECT (SOLID) 33 20% 20V
C6	1-106-343-00	s	FILM 0.001 10% 100V
C7	1-106-343-00	s	FILM 0.001 10% 100V
C8	1-136-153-00	s	FILM 0.01 10% 50V
C9	1-136-153-00	s	FILM 0.01 10% 50V
C10	1-124-946-11	s	ELECT 100 20% 25V
C11	1-124-946-11	s	ELECT 100 20% 25V
C12	1-124-946-11	s	ELECT 100 20% 25V
C13	1-124-946-11	s	ELECT 100 20% 25V
C14	1-127-531-11	s	ELECT (SOLID) 33 20% 20V
C15	1-124-946-11	s	ELECT 100 20% 25V
C16	1-124-515-11	s	ELECT (SOLID) 47 20% 10V
C17	1-127-515-11	s	ELECT (SOLID) 47 20% 10V
C18	1-127-515-11	s	ELECT (SOLID) 47 20% 10V
C19	1-124-946-11	s	ELECT 100 20% 25V

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

C-DC CONVERTER, FRAME

Ref No.	Parts No.	SP	Description
CN1	1-564-706-31	o	PIN HEADER, STRAIGHT 4P
CN2	1-564-210-00	o	PIN HEADER, STRAIGHT 12P
D1	8-719-907-25	s	ERA84-009
D2	8-719-907-25	s	ERA84-009
D3	8-719-907-25	s	ERA84-009
D4	8-719-907-25	s	ERA84-009
D5	8-719-907-25	s	ERA84-009
D6	8-719-907-25	s	ERA84-009
D7	8-719-981-00	s	ERC81-004
D8	8-719-981-00	s	ERC81-004
D9	8-719-981-00	s	ERC81-004
D10	8-719-981-00	s	ERC81-004
D11	8-719-940-69	s	1SS131
D12	8-719-940-69	s	1SS131
D13	8-719-110-41	s	RD15E-B2
D14	8-719-110-22	s	RD11E-B2
D15	8-719-109-93	s	RD6.2E-B2
D16	8-719-109-93	s	RD6.2E-B2
D18	8-719-110-17	s	RD10E-B2
L1	1-421-547-00	s	CHOKE 10
L2	A-4929-671-A	o	CD-73 L ASSY, 910
L3	1-421-547-00	s	CHOKE 10
L4	A-4929-671-A	o	CD-73 L ASSY, 910
L5	1-421-547-00	s	CHOKE 10
L6	A-4929-671-A	o	CD-73 L ASSY, 910
L7	1-421-547-00	s	CHOKE 10
L8	1-459-215-00	s	(WITH CORE) 120
L9	1-421-547-00	s	CHOKE 10
L10	1-421-381-11	s	FERRITE CHOKE
L11	1-421-547-00	s	CHOKE 10
Q1	8-729-177-43	s	2SD774
Q2	8-729-177-43	s	2SD774
Q3	1-807-915-11	s	2SC3692-L
Q4	1-807-915-11	s	2SC3692-L
R1	1-217-611-31	s	METAL PLATE 0.1 10% 2W
R2	1-244-851-11	s	CARBON 120 5% 1/2W
R3	1-244-851-11	s	CARBON 120 5% 1/2W
R4	1-247-696-11	s	CARBON 47 5% 1/4W
R5	1-247-696-11	s	CARBON 47 5% 1/4W
R6	1-244-851-11	s	CARBON 120 5% 1/2W
R7	1-249-431-11	s	CARBON 15k 5% 1/4W
R8	1-249-431-11	s	CARBON 15k 5% 1/4W
T1	1-447-717-11	s	CONVERTER

Ref No.	Parts No.	SP	Description
FRAME			
	1-464-867-11	s	CONVERTER UNIT, DC-DC (CD-73K)
⚠ CB900	1-532-543-21	s	BREAKER CIRCUIT "BREAKER"
CN100	1-562-227-21	s	RECEPTACLE, BNC "ADV SYNC IN"
CN101	1-562-227-21	s	RECEPTACLE, BNC "SC IN"
CN102	1-562-227-21	s	RECEPTACLE, BNC "VIDEO 1 OUT"
CN103	1-562-227-21	s	RECEPTACLE, BNC "VIDEO 2 OUT"
CN900	1-563-971-11	s	CONNECTOR(R-F) 20P "FROM VTR"
CN901	1-564-603-11	s	CONNECTOR (WITH DC SWITCH), 4P "DC IN 12V"
CN902	1-509-176-31	s	RECEPTACLE 3P (For UC) "AUDIO OUT"
	1-509-184-31	s	RECEPTACLE 3P (For J) "AUDIO OUT"

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

9-4. PACKING MATERIAL AND ACCESSORY (SUPPLIED)

Parts No.	SP	Description
1-559-480-11	s	CABLE ASSY
1-566-771-11	s	CONNECTOR (R-F) 20P
2-125-558-01	o	SPACER
2-125-560-03	o	CUSHION (RIGHT)
2-125-561-02	o	CUSHION (LEFT)
2-125-565-02	o	INDIVIDUAL CARTON
3-698-917-01	o	BELT, SHOULDER